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UNIVERSITY OF ALBERTA

THE EFFECT OF A COMPREHENSIVE AIDS CURRICULUM ON MOTIVATING CHANGES IN NORTHERN CANADIAN COLLEGE STUDENTS

BY

ROSEMARY MOSKAL ©

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF EDUCATION
IN
COUNSELLING PSYCHOLOGY

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA
(FALL, 1990)

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19 December 1989

Ms. Rosemary Moskal
Box 876
Fort Smith, N.W.T.
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Dear Ms. Moskal:

Thank you for your letter of November 25 with the copy of your questionnaire. You have our permission to use any part of the **Canada Youth and AIDS** questionnaire as long as credit for the source of item is identified.

We regret the the Technical Report for the study is not yet available, but expect it will be completed within the next two months at which time we will forward you a copy.

Good luck with your thesis.

Sincerely,

M MacKay for

Alan J.C. King, Ed.D.
Director, Social Program Evaluation Group
Professor, Sociology of Education

University of Alberta

Release Form

Name of Author: Rosemary Jean Moskal

Title of Thesis: The Effect of a Comprehensive AIDS Curriculum on Motivating Changes in Northern Canadian College Students

Degree: Master of Education

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Date: July 21 1990

UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "The Effect of a Comprehensive AIDS Curriculum on Motivating Changes in Northern Canadian College Students" submitted by Rosemary Moskal in partial fulfillment of the requirements for the degree of Master of Education in Counselling Psychology.

....

Dr. H.W. Zingle, Supervisor

....

Dr. B. Conn-Blowers

....

Dr. R. Carney

Date ....Jany 25, 1990....

This thesis is dedicated

to

my beautiful adopted son, Luke, whose Inuit/Dene heritage inspired me to try to help the Aboriginal peoples of Canada.

Abstract

The literature on AIDS education reveals that although many students throughout North America have shown an increase in their knowledge about AIDS following educational programs, little of this knowledge has been translated into appropriate behavioral or attitudinal changes. The reasons for this repeated phenomenon are grounds for much speculation amongst educators and health officials the world over. Some think educational programs are doomed to failure because adolescents are at an age when risk taking behaviors are an inevitable part of their growth and development. Others argue that short educational programs or workshops can never be expected to replace cultural values and question the morality of educational programs which blatantly advocate the use of condoms. Still other investigators propose that there has been too much haste in instigating educational programs without an evaluation of their effectiveness. Thus, without targeting the intervention to a specific group, much effort in time and money may have been expended on inappropriate programs.

The results of the 1988 Canada Youth and AIDS Study confirmed that, although most Canadian adolescents generally know how the AIDS virus is transmitted, they continue to engage in behavior that puts them at risk because they lack the knowledge and skills about how to prevent HIV infection.

A comprehensive curriculum was designed to allow students the opportunity to learn the facts about AIDS transmission and prevention, discuss personal opinions, clarify values, and develop the skills necessary to practice low risk behaviors. The course was implemented over two months to 123 predominantly aboriginal college students (80%) who were attending the Fort Smith Thebacha Campus of Arctic College in the Northwest Territories. The purpose of the study was to see what effect the comprehensive course would have on this target group's a) knowledge of HIV transmission and prevention; b) attitudes towards low risk behaviors; and c) compassionate attitudes towards those infected with HIV.

Eight intact classes of students were divided between the control and experimental groups and a questionnaire was administered as the pretest and posttest instrument. An ANOVA revealed the experimental subjects who received the course, significantly increased their knowledge of AIDS transmission and prevention ($p<.001$), their attitude towards low risk behaviors ($p<.01$) and their compassionate attitude towards those afflicted with the AIDS virus ($p<.05$) over the subjects in the control group who received no course on AIDS.

Acknowledgements

Thanks are extended to Dr. Harvey Zingle, my thesis advisor, for his guidance and encouragement, and to the other committee members, Dr. Beth Conn-Blowers and Dr. Robert Carney. Their positive approach to this project was a great help.

Special thanks must go to both the staff and students at the Thebacha Campus of Arctic College in Fort Smith. I deeply appreciate those staff members who were able to envision the value of this project and allow the AIDS program to interrupt their regular busy schedules. As well, I wish to commend those students who participated in the study and stretched beyond their silent anonymity to voice some very personal issues. May their concern for the potential spread of the AIDS epidemic in the Northwest Territories help to protect and preserve the Aboriginal peoples of Canada.

I express my gratitude as well to my family and friends for their loving support and encouragement throughout my endeavors to bring this project to fruition.

Table of Contents

Chapter Page

List of Tables x

I. Introduction to the Study.......... 1

Background.......... 1

The Problem.......... 11

Purpose of the Study.......... 16

Research Questions 17

Delimitations of the Study.......... 18

Limitations of the Study.......... 19

Assumptions of the Study.......... 19

Definition of Terms.......... 20

Summary.......... 21

II. Review of Related Literature.......... 22

The Responsibility of Schools Concerning AIDS...... 23

Are Professinals Ready to Respond Appropriately?... 27

Lack of Evaluation of Existing Educational Efforts. 31

Factors Involved in High Risk Behaviors.......... 36

What to Teach? Morality versus Sex Education...... 44

Tailoring Programs For Specific Target Groups...... 50

Chapter Summary.......... 54

Research Hypotheses.......... 54

Operational Definitions.......... 56

III. The Investigative Procedures.......... 59

Subjects.......... 59

The Instrument.......... 63

Design of the Study.......... 67

Study Procedure.......... 67

IV. The Results of the Investigation.................. 78
Findings for Hypothesis #1......................... 79
Findings for Hypothesis #2......................... 81
Findings for Hypothesis #3......................... 83
Summary of Results................................. 86
V. Summary of Purpose of the Study.................... 88
Discussion of Findings............................. 90
Evaluation of the Course........................... 91
Implications and Suggestions for Intervention
Programs... 96
Recommendations 101
VI. References... 104
Appendix A. Permission to Conduct Research at
Thebacha Campus, Arctic College....... 117
Appendix B. Canada Youth and AIDS Study Instrument 119
Appendix C. Questionnaire Items for Hypotheses.... 148
Appendix D. Student Consent Form.................. 152
Appendix E. AIDS Course Outline................... 154
Appendix F. Experimental Drugs Opinion Poll....... 158
Appendix G. Condom Controversy Opinion Poll....... 160
Appendix H. Condom Demonstration Opinion Poll..... 162
Appendix I. Permission to use Canada Youth and
AIDS Instrument....................... 165

List of Tables

Table Page

1 Analysis of Covariance of Knowledge on Posttest 79

2 Pretest, Posttest, and Adjusted Posttest Means of Knowledge Scores for the Groups 80

3 Analysis of Covariance of Low Risk Behaviors on Posttest 82

4 Pretest, Posttest, and Adjusted Posttest Means of Low Risk Behavior Scores for the Groups 83

5 Analysis of Covariance of Compassionate Attitude on Posttest 84

6 Pretest, Posttest, and Adjusted Posttest Means of Compassionate Attitude Scores for the Groups 85

Chapter I

Introduction to the Study

The present study was designed to investigate the effect of a comprehensive acquired immune deficiency syndrome (AIDS) course on the knowledge and attitudes of predominantly aboriginal college students in the Northwest Territories. Students at the Thehacha Campus of Arctic College who received the course were compared with those who did not. This initial chapter will elaborate on background information relevant to the origin and scope of the AIDS pandemic, the problems facing the educational field in attempting to control the spread of AIDS, the purpose of this investigation, the research hypotheses, the assumptions, limitations and delimitations of the study, and provide definitions of key terms. An overview of the organization of this thesis is also provided.

Background

Scope of the Pandemic

> Ever since the AIDS pandemic was initially recognized in 1981 it has been met by denial and a gross underestimation of its potential magnitude. The pandemic is still in its early stages and its ultimate dimensions are difficult to guage, but by now it is apparent that AIDS is an unprecented threat to global health. (Mann, Chin, Piot, & Quinn, 1988, p. 82)

The World Health Organization (WHO) estimates that over 250,000 cases of AIDS have already occurred, that between 5 and 10 million people worldwide are infected with the AIDS virus and that within the next five years about one million new AIDS cases can be expected. In short, the global situation will get much worse before it can be brought under control.

The course of infection is becoming better known. In its interim report the Royal Society of Canada (1988) states that the scientific community generally accepts the human immunodeficiency virus (HIV) as the cause of AIDS. Some weeks to months after being infected, a person develops antibodies that can be detected in blood tests. Other signs of illness may or may not appear before AIDS develops, but nevertheless the HIV-infected person can transmit the virus to others. AIDS usually develops several years after infection with HIV and is the final manifestation of the destruction of the body's immune system brought about by the virus. The usual survival time after diagnosis of AIDS is from one to two years. At present, there is neither a vaccine to prevent HIV infection nor a cure for AIDS.

By now a clear picture of how HIV is transmitted has also emerged. Studies have consistently shown that the virus is transmitted by sexual intercourse (vaginal or anal), by the injection or administration of infected blood, or from an infected mother to her infant.

Keeling (1989) explains that epidemiologists commonly conjure up the image of an iceberg to describe the epidemic of infection with HIV. At the visible tip are people with AIDS, the ultimate clinical consequence of HIV infection. Beneath them are many people who currently are infected by HIV but who do not have AIDS. Some of these people have mild or moderately severe symptoms, called AIDS-related complex (ARC), or only chronically enlarged lymph nodes. But most infected people are at the very base of the iceberg; while harboring HIV, they are currently completely healthy. The WHO claims the thousands of AIDS cases now being reported every year are due to HIV infections that began spreading silently and extensively in the 1970's, before the disease was even recognized and before HIV was isolated. Although blood stored as early as 1959 in Zaire has been found to contain antibodies against the AIDS virus, the actual origin of HIV is still not known with any certainty.

The WHO reports that more than 150 countries have now established national AIDS committees and, while the disease is spreading too rapidly for any group to ever claim currency and comprehensiveness, it is well known that in North America and Western Europe the majority of AIDS victims are homosexual and bisexual men and intravenous drug users of both sexes. In Africa and parts of the Caribbean the disease is mainly spread through heterosexual contact, producing roughly equal numbers of male and female AIDS patients (Laver, 1988). The reasons for this discrepancy are as widespread as the pandemic itself.

Talbot (1990) states that the global war on AIDS accentuates the economic difference between the world's affluent North and impoverished South. While the developed world looks forward to controlling the disease with modern science's latest array of wonder drugs, doctors in the Third World struggle to stay stocked with such basic medical supplies as syringes and latex gloves. He claims the cost of caring for twenty-five AIDS patients in the United States is equal to the entire annual budget of a two thousand hospital bed in Zaire. In some African cities between 20 and 30 percent of sexually active adults are now infected, along with growing numbers of pregnant women and a majority of female prostitutes. Statistics such as these at the Fifth International Conference on AIDS in Montreal (June, 1989) prompted the president of Zambia to liken the AIDS epidemic to a "soft nuclear bomb - silent and destructive and threatening the human race with extinction" (p. 43).

Some political systems also contribute to the spread of the disease. The world's first epidemic among children found recently in Romanian hospitals was due to the HIV contaminated blood transfusions given to malnourished children. The cases of AIDS occurred among the 14,000 children who had been left abandoned by desperate adults in a country where the leader had put a ban on contraception (The Associated Press, 1990).

At present in the Soviet Union homosexual acts are criminal offences punishable by up to five years in prison.

As a result, homosexuals, who are among the highest-risk AIDS group, are reluctant either to identify themselves publicly or to seek treatment (Wilson-Smith, 1988).

While WHO considers many countries to be either underdiagnosing or underreporting their number of AIDS cases, it is believed that the statistics for developed countries such as the United States and Canada are more accurate. Currently, the U.S., with almost 100,000 AIDS cases, continues to be the nation with the largest number of cases. It is widely estimated that close to a million and a half persons in the United States are infected with the AIDS virus, and new cases of AIDS are being reported at the rate of 100 per day (e.g., Burke, 1989; Jones, 1988; Tolsma, 1988; Dienstbier, 1987). Morin (1988) warned Americans of the devastation by stating "...by early 1989 the death toll from AIDS will have exceeded that from the Vietnam conflict" (p. 840).

Until recently, most Americans thought of AIDS as essentially a man's disease afflicting homosexual, bisexual, and intravenous drug abusing males. However, that pattern is changing. The number of cases among women today is approximately equivalent to the number of cases among men only two to three years ago. Since 1980, AIDS is the most frequent cause of death in New York City for those women between the ages of 25 and 29 (Mays & Cochran, 1988). This demographic change, along with the latent period of incubation of HIV should be cause for grave concern among college administrators. Dr. Richard Keeling, chairman of the American College Health Association's AIDS task force states that the campus iceberg is even larger at the bottom because few students will progress all the way through the various levels of infection to have visible AIDS while they are still in school. "You will think that because you don't see it, it isn't there" (Biemiller, 1988, p. A22). To give credence to his statement he warns that at the rate the epidemic is progressing the things we traditionally think of as killing lots of our youth will be surpassed by AIDS. He claims that in 1991 alone, as many people will die of AIDS in the United States as have been diagnosed with it to date.

Perhaps Slesnick (1988) sums the situation up best; "Whether the AIDS epidemic will be the Black Death of modern times is still uncertain." (p. 34).

AIDS in Canada and Among Aboriginal People

> ...it is assumed that AIDS will not have a devastating effect on the Inuit population. Although the Inuit are a sexually active and partially isolated population, no special policies or programs have been developed either to prevent this disease from reaching the Arctic or to monitor its progress. Given this situation, and the lack of epidemiological data, I cannot say with any confidence that AIDS will not have a devastating effect on the Inuit population. (Irwin, 1989, p. 3)

According to the Federal Centre for AIDS in Ottawa, more than 2,500 cases of AIDS have been reported in Canada (Burke, 1989). Despite these small numbers in comparison to other parts of the world, the Royal Society of Canada (1988) concluded at the end of their study that AIDS is, and will continue to be, a very serious problem for Canadian society.

The Canada Youth & AIDS Study (1988) surveyed the knowledge, attitudes and behaviour of 38,002 Canadian young people who were in grades 7,9,11, first year college/university, recent dropouts and street youth in larger cities. The results showed that while many young adults are anxious to know more about AIDS and how HIV is transmitted "their anxiety does not seem to have motivated them to modify behaviour that puts them at risk" (p. 133). Although trends among Canadian youth were similar throughout the provinces and territories, there were some significant areas of difference in the Northwest Territories (NWT). Specifically, despite that 60% of the youth in the NWT, compared with 54% in Canada generally were worried about getting AIDS, the NWT was the lowest scoring province/territory on AIDS knowledge. Approximately one-half of the young people in the NWT believed their chances of catching a STD were low. While the majority of Canadian youth had a positive relationship with their parents, few in the NWT did so - more youth in the NWT said that they would raise their children differently than they were raised. Approximately two-thirds of the Northwest Territories Grade 11's, compared with nearly one-half of their Canadian peers, had sexual intercourse at least once. Of those NWT Grade 11's who had sexual intercourse, one-third had six or more sexual partners. While it is important to note that grade 11 students in the NWT are older than the national average, these findings were startling to Canadian educators and health care workers concerned about the transmission of HIV.

These statistics raise the question as to whether or not Canada's aboriginal population is even more susceptible to AIDS than Canadians in general. In the United States, AIDS is disproportionately a disease of racial minorities. A recent pronouncement by the director of the national Indian Health Service in the United States that gay and bisexual Native Americans were nonexistent, and AIDS was not a Native American problem led one Comanche activist to believe it was time to confront the homophobia and silence around AIDS. She stated, "No other ethnic group has over 1% of its people infected. We're looking at whole nations being wiped out. The rate of AIDS in Native Americans doubled from 1987 to 1988 and doubled again from 1988 to '89" (Tasini, 1990, p. 35).

In order to investigate the nature and extent of HIV infection and related issues as they affect the aboriginal community, Health and Welfare Canada (1989) established a Joint National Committee. The committee concluded that the incidence of aboriginal people with AIDS is generally underestimated. A similar study conducted in 1988 in the

United States concluded that there were a variety of factors contributing to the AIDS problem among Native Americans. Social and economic factors included lack of information, apathy, alcohol-related behavioral disorders, and general poor health.

The problem of AIDS and Native youth was addressed at the First Canadian Conference on AIDS and Related Issues in the Native Community in Vancouver in April, 1989:

> There are clear indications that native children and adolescents are at risk as a population, and certain subgroups of native youth are at a particularly high risk. Increase in the incidence of pediatric AIDS... will occur specifically as a result of perinatal transmission. Native youth who are sexually active, substance abusing, homeless, transient, or in correctional institutions are at especially high risk ...Transient native youth drifting from cities to and from reservations form a particularly high risk bridge from those currently infected to a larger number of age peers and to a larger geographical area (Joint National Committee's Interim Report, 1989, p. 12).

The committee summed up additional problems with an awareness of how little is actually known about many relevant issues concerning HIV transmission. For example, the homosexual/bisexual aboriginal population, the prevalence of IV drug use, the availablility of AIDS information in the communities, existing efforts of the communities to devise and deliver educational programs,and the amount of sexual oppression occurring amongst aboriginal peoples.

A recent survey by Eggerston (1990) in Ontario found that "80% of native women are battered, threatened or sexually abused and four out of ten aboriginal children are highly victimized" (p. B10). Turvey says that sexual abuse is one of the main factors behind child prostitution on the streets of Vancouver. He believes that 70% of the working children are native Indians from all parts of Canada (Health and Welfare Canada, 1989). When the Canadian government sponsored an investigation into the prevalence of sexual abuse in Canada, the Committee on Sexual Offences Against Children & Youths (1984) found that about one in two females and one in three males had been victims of sexual offences. Four out of five of the victims were under the age of 21. It is little wonder for the concern that sexual abuse is another potential source of HIV transmission among teens (e.g., Haffner, 1988).

The data on aboriginal people who have been infected by the virus and/or who have developed AIDS is sparse, inconsistent and incomplete. Health and Welfare Canada is concerned that aboriginal people not be stigmatized by the profile of behaviors described in their interim report (1989) as it is an examination of those who participate in high risk behaviors and does not impy that all aboriginal people share the same life style.

The First Canadian Conference on AIDS in the Native Community concluded that the aboriginal community is not yet convinced that AIDS is a serious health threat. The few reported aboriginal cases have permitted the continued adoption of the attitude "not in my community because we don't have those types of people here" (Health and Welfare Canada, 1989, p. 17). In contrast, although the public health sector and social service sector of the aboriginal community are convinced of the seriousness of the threat to health, "it appears that many people are waiting for someone to take a leadership role and to tell them what they should be doing" (p. 17).

The Problem

The epidemic of AIDS is ending an unprecented interval of optimism about medicine's ability to conquer illness. Gallo (1988) points out that as recently as a decade ago it was widely believed that infectious disease was no longer much of a threat in the developed world. It was thought that the remaining challenges to public health stemmed from noninfectious conditions such as cancer, and degenerative diseases. However, that confidence was shattered in the early 1980's by the advent of AIDS.

In spite of the startling nature of the AIDS epidemic, science responded quickly. Within two years the human immunodeficiency virus was isolated, its targets in the body were established, and a blood test was formulated to detect antibodies to the virus. Following that inital burst, progress has been steady, albeit slower. In the absence of a cure or vaccine, science has been forced to pass the torch to the field of education as the most effective means of controlling the transmission of HIV. But just how much progress has been made in dispelling the ignorance responsible for spreading the epidemic is questionable.

Richard Keeling (1989), chairman of the American College Health Association's task force, says that a recent government survey showed a third of the people questioned still believe they can get AIDS from mosquitoes and toilet seats. He states:

> Casual contact does not transmit HIV...saliva, sweat, tears or urine have not been implicated in any case here or in Europe. No object except a needle has ever transmitted HIV. Mosquitoes do not transmit HIV... People ask, "What about swimming pools? What about mosquitoes? What if a mosquito weighed 15 pounds and flew 100 miles per hour? What if? What if?" (Biemiller, 1988, p. A22)

Indeed, numerous studies have repeatedly shown that the general public still needs to be convinced that AIDS cannot be transmitted through casual contact (e.g., Gottlieb, Vacalis, & Palmer, 1988; McDermott, Hawkins, Moore, & Cittadino, 1987; Darrow, 1987; Edwards, 1987). Winslow (1988) suggested that the term "casual contact" in itself was misunderstood. Many of the undergraduates he surveyed feared contamination from "wet" contact such as kissing or sharing a glass.

The WHO has repeatedly stated there is no evidence that HIV can be transmitted through casual contact and is concerned that individual reports and rumors to the contrary should not be allowed to distort the basic facts about transmission because "understanding of how HIV is spread and not spread is central to the development of appropriate and effective control measures" (Mann et al., 1988, p. 82). Unfortunately, informational setbacks do occur and help to rekindle old myths. Underwood (1988) cites the most recent example as the latest book by the well known and respected sex therapists, Masters & Johnson, along with Dr. R. Kolodny. The authors maintain that, theoretically, it is possible to catch AIDS from a toilet seat, that mosquitoes can transmit the virus, and that even intense kissing can cause the disease to spread. The Federal Centre for AIDS in Ottawa claims: "It is a very dangerous book, full of specious conclusions. It is going to feed the fires of misconceptions and foster plague mentality of the people" (p. 46).

One consequence of the fear and hysteria about AIDS is the suffering in the lives of AIDS victims and carriers. "People known or just suspected to be infected with the AIDS virus have been fired from jobs, evicted from apartments, discharged from the military, and rejected by friends and family. Even some physicians, hospitals, and ambulance crews deny them service" (Slesnick, 1988, p. 34). Kinnier explains that reactions to the AIDS crisis have followed a similar pattern to past life-threatening epidemics. Studies of the black plague, the Boston smallpox epidemic, and yellow fever suggest that initial indications of an epidemic are ignored, then panic displaces rationality (Wilson, 1987).

Although fear is a natural reaction to an epidemic, Morin (1988) says that the level of fear among those without behavioral risk factors has been irrational and excessive. He cites mandatory testing as one of the better examples of how public policy can be driven by public fears. Another example is Sweden's plan to establish an island colony in order to quarantine patients infected with the AIDS virus. In its report on the subject entitled, "Ignorance That Kills" (November, 1989) the Globe and Mail called the plan an "outrageous scheme" which was a "striking example of the ignorance-fuelled hysteria that is the most widespread and dangerous symptom of the disease" (p. A8). As Dienstbier (1987) summarizes: "Fears and insecurity often lead to extremism and hate, and the building of personal, social, and political fortresses" (p. 5).

Unfortunately, studies show that stigma and discrimination are problems not only for people with AIDS and those with HIV infections, but also for those who are perceived to be potential "AIDS carriers," whether they are or not (e.g., Sendor, 1988; Dienstbier, 1987; Sheehan, Lennon, & McDevitt, 1987). Morin states that AIDS has disproportionately affected groups, such as gay men and IV drug users, who are already subjected to substantial stigma. Violence directed towards those with the virus or perceived to be at increased risk for infection has also been widely reported. Little attention has been paid to programs specifically designed to reduce stigma and decrease the frequency of incidents of discrimination and violence.

Several studies have shown the high positive correlation between homophobia and AIDS-phobia is inversely related to the amount of knowledge about HIV transmission (e.g., Goodwin & Roscoe, 1988; Temoshok, 1988; Triplet & Sugarman, 1987; Royse, Dhooper, & Hatch, 1987).

Thus, educators struggling with devising relevant and effective curriculums are faced with more than disseminating facts about HIV transmission. The twin problems of indifference and panic must influence the agenda for safer sex education and counselling. It is common for human beings to deny the approach of danger when its presence is too threatening to recognize. Catastrophes are typically misfortunes that happen to "others", not me or mine. The formidable task facing educators is to instill in their students a need "to replace self-deception and apathy with a sense of urgency of a safer sexual life" (Canadian AIDS Society, 1988, p. 1). Other people sense too well the danger and feel overwhelmed by it. This can lead to scapegoating, self-destructive inactivity, or a despairing celebration of the last days before the end.

Keeling (1989) adds a fourth tier to the bottom of the iceberg analogy to depict the need for AIDS prevention courses to be taught to older students. He says that colleges will encounter relatively few students living with AIDS itself; some who have milder illnesses, more who are asymptomatically infected, and many more who are worried or afraid. "Students who fear they have been or might eventually be infected by HIV comprise the vast majority of the campus population concerned about AIDS" (P. 263).

Because the virus is transmitted almost exclusively by behavior that individuals can modify, educational programs to influence relevant behavior is expected to be effective in preventing the spread of HIV. In addition, a more compassionate attitude towards individuals either suffering from AIDS or who are carriers of the virus must be implemented in existing educational programs. King, Beazley, Warren, Hankins, Robertson, & Radford (1988) reported that Canadian youth "recognize their need for additional information that is clear, frank, accurate and unbiased" (p.133). Students both desire and deserve this information. The problems that remain to be addressed are logistical. What constitutes an effective curriculum and, who is expected to teach it?

Purpose of the Study

This study was designed to develop and investigate the effect of a comprehensive acquired immune deficiency syndrome (AIDS) course on the knowlege and attitudes of predominantly aboriginal college students in the Northwest Territories. Reasons behind risk behaviors and possible strategies to reduce those behaviors on both a personal level and within individual northern communities were also investigated. Attitudes towards those with AIDS or those perceived to be at risk of contracting AIDS were also discussed. In order to fully investigate the issues surrounding the AIDS epidemic, a variety of didactic and experiential approaches were used. The information gathered from the students throughout the course was included in a college curriculum on the prevention of AIDS and other sexually transmitted diseases (STDs) through attitudinal and behavioral change.

Research Questions

There are numerous questions which bear upon the issue of the role education should play in the prevention of HIV transmission. Indeed, there are those who claim that sex education should be left up to the home. Some researchers claim it's a waste of educators' time (e.g., Smith, 1987). Others would like to see a mandatory course on AIDS or at the very least a course offered for university credit (e.g., Trice & Price-Ashton, 1987).

Many educators wonder what type of educational intervention is likely to be most effective? Is there an optimal method for facilitating this type of learning process? Even if programs were geared towards specific target groups, can educators effectively change cultural attitudes and traditional behavior? And inevitably, policy makers must ask themselves who it is that should be held responsible for the implementation of these programs. Since there are already heavy demands on the curriculum it is imperative that instruction time be used well. What inservice training should educators be given to successfully carry out an effective program?

This study specifically addressed the following questions:

1. Will a comprehensive course on AIDS increase aboriginal college students' knowledge about HIV transmission?

2. Will a comprehensive course on AIDS involving clear, accurate and explicit information about the transmission and prevention of AIDS have a positive effect on attitudes towards low risk behaviors?

3. When provided with the opportunity to discuss personal values regarding the issues of AIDS, will students adopt a more compassionate attitude towards people infected with the AIDS virus?

Delimitations of the Study

This study is delimited to male and female students attending the Fort Smith Thebacha Campus of Arctic College. The Thebacha Campus sample of students represented 29 of the communities throughout the entire Eastern, Central and Western Arctic.

Limitations of the Study

The limitations of this study are as follows:

1. The degree to which the AIDS/STD's awareness and prevention program was effectively conceived and presented.

2. The degree to which the treatment and control subjects responded truthfully to the AIDS questionnaire.

Assumptions of the Study

The assumptions underlying this study are as follows:

- The degree of interest and ability was similar throughout all 10 classes of students who comprised the sample.
- The Thebacha Campus was representative of the students who attend Arctic College.
- The students' cultural values, attitudes and behaviors were representative of individuals living in communities throughout the Northwest Territories.
- The curriculum was comprehensive, informative and accurate.
- The course instructor was fully qualified and competent in presenting the curriculum in an effective manner.
- The course content was adequately covered despite the various times allowed for instruction/workshops in which it was presented.

Definition of Terms

AIDS. This is an abbreviation of the term Acquired Immune Deficieny Syndrome. The medical condition AIDS represents the terminal phase of infection with the AIDS virus. This virus gradually destroys the body's natural immunity. When an infected person's immunity finally fails, he or she will develop rare types of infections and cancers (opportunistic infections) that do not affect people with normal immune systems. Only then does a person actually have "full blown" AIDS. The majority of patients die within one to two years of diagnosis (B.C. Ministry of Health, 1987, p. 8).

HIV Infected. This refers to a positive blood test for antibodies to the AIDS virus. All persons with a positive test can transmit the infection. This includes asymptomatic carriers, ARC patients, and AIDS patients.

Comprehensive AIDS intervention program. An extensive course on AIDS which is clear, accurate, explicit, and allows for the discussion and evaluation of one's own perspective on a variety of controversial issues. AIDS is placed in the context of sexually transmitted diseases. Such a curriculum includes both didactic and experiential approaches in an effort to disseminate information in a manner geared to have an optimal effect on lowering risk behaviors.

Aboriginal. According to Health and Welfare Canada in its Interim Report on Aboriginal AIDS Education and Prevention (1989), Aboriginal is defined to be Indian, Inuit, and Metis, and those who reside both on and off reserves (p. 1).

Risk behaviors. Behaviors which carry the risk of HIV transmission. The AIDS virus is transmitted from someone who is infected to another person in one of four ways. These ways are through unprotected sex, through sharing intravenous drug needles or syringes, receiving transfusions of contaminated blood or blood products, and from an infected mother to her baby during pregnancy or when breastfeeding (B.C. Ministry of Health, 1987, p. 13).

Summary

A problem has been defined relating to the role educational policy makers must play in the prevention of the spread of the AIDS epidemic in Canada, and in particular, among aboriginal college students in the Northwest Territories. An effective AIDS prevention curriculum is a potential solution if it can be shown to enhance a more positive attitude towards low risk-taking behaviors and an increase in tolerance to those either infected or perceived to be infected with the AIDS virus.

This chapter introduced the present study which compared the effect of a comprehensive AIDS course curriculum on knowledge and attitudinal change of predominantly aboriginal college students with a control group of students who received no such program.

II. Review of Related Literature

This chapter is a review of the literature related to the present study. It is divided into seven major sections. The first section examines the responsibility of schools to educate students and staff about the AIDS epidemic. The second section questions whether educational professionals and policy makers are prepared to accept this responsibility. The third section depicts the lack of evaluation of existing educational efforts. Have many AIDS programs hastily been implemented as a response to a crisis situation as opposed to a well planned comprehensive health program? The fourth section looks at the difficulty of getting those who are perceived to be at a high risk for HIV infection to recognize themselves as such and subsequently modify their behavior. An overview of the factors involved in high risk behaviors is examined. The fifth section explores the controversy surrounding the issue of morality. Many opponents to explicit sex education in schools argue that teachers are condoning extramarital sex and promiscuity by presenting lectures on the use of condoms. The sixth section presents the potential solution of tailoring programs for specific target groups as an effective means of reaching an audience. The final section offers suggestions for these types of specific intervention programs. A summary of the chapter is provided.

The Responsibility of Schools Concerning AIDS

"HIV is almost always transmitted through certain readily identifiable and mostly voluntary behaviors...because they are recognizable, the behaviors that transmit HIV also make it possible to prevent its spread. Consequently, information and education programs are needed in all countries" (Mann et al., 1988, p. 89).

This sentiment expressed by the WHO reverberates throughout the literature on AIDS (e.g., Haffner, 1988; Laver, 1988; Underwood, 1988; Johnson & Adler, 1987; Lenaghan & Lenaghan, 1987). Wattleton & Levy (1988) state that while teenagers are sexually active, they are also sexually illiterate and AIDS education in our schools is a chance to make the difference.

The fact is that most North American adults recognize the early age at which youth need to be advised about how to protect themselves from becoming infected with HIV and recognize that schools can play an important role in providing such education. According to a November 1986 nationwide poll, 83% of Americans agreed that the nations's system of public and private schools had a strategic role to play in assuring that young people understand the nature of the epidemic they face and the specific actions thay can take to protect themselves from becoming infected -- especially during adolescence and adulthood. (Tolsma, Kreuter, Kolbe, & Jones, 1988).

Weiner (1986) contends that schools should educate students, employees and the community about how AIDS is transmitted because they are in the best position to disseminate information to adolescents who are hitting the age of experimentation with both sex and drugs. He quotes Dr. Richard Keeling, chairman of the AIDS Task Force of the American College Health Association (ACHA) as saying that no matter what the community response, schools absolutely must teach kids before they come to college because first-year college students are already coming to college testing positve for AIDS as a result of being infected in high school: "It's impossible for us to take high school kids who have not had any instruction in sexuality and then expect them to understand what you are talking about when you talk about AIDS (p. 100). Keeling thinks education about AIDS ought to start in the 9th and 10th grade.

Weiner (1986) also quotes Dr. L. Cooper in New York who uses the analogy of the ticking of a clock to represent the number of people constantly dying and being infected with AIDS. Cooper states that while there is not much we can do about it, "the clock is also ticking on the kids who currently are not infected. We have the ability to prevent the spread. It's a critical responsibility of schools and parents" (p. 100).

The need for education is even more serious in higher education, where older students and greater sexual experimentation greatly raise the chances of AIDS crisis on campus. As Strouse & Phillips (1987) explain, because of the sometimes long incubation of the AIDS virus, it is the older student population who will become proportionately more affected and this is the group educators should assist in dealing with fears derived from misinformation about the disease being transmitted by casual contact. Keeling (1989) agrees by saying that the "absence of adequate information provokes anxiety and fear, depression and denial: it can lead to both unsafe and overly cautious behavior" (p. 262).

Other researchers (e.g., Biemiller, 1987; Caron, 1987; McNamee, 1987) also stress the crucial role of colleges and universities in halting the spread of AIDS by educating all their students about the disease and how to avoid becoming infected with the virus that causes it, but it is Weiner (1986) who most clearly emphasizes that there is no question that colleges and universities face issues elementary and secondary schools never have to confront: "College is a living environment, and our kids are older...the situation is changed dramatically because kids in elementary and secondary school don't live together" (p. 103).

The great challenge of meeting the psychological needs of college students concerned about HIV infection is to integrate the many specific issues of AIDS with the already demanding tasks of psychological maturation. Keeling (1989) stresses that issues such as sexual behaviors and practices, approaches to intimacy, social and family relationships, psychological and spiritual needs and adjustment to physical realities do not occur in isolation. Given the complexity of these issues surrounding AIDS, college students have a great need for information about the disease.

However, there are those who feel that the response from college administrators and staff in implementing AIDS education has been less than adequate. Norris (1987) claimed that colleges and universities have been too slow to begin AIDS education programs and said that too many colleges had the attitude that AIDS is not a problem on their campuses. He called this attitude one of "ostrich mentality" which only served to cripple AIDS advice. Biemiller (1987) also reported that many health experts assailed colleges for wasting the opportunity to lead the AIDS-education drive among students. He pointed out that AIDS education was seen as the moral and ethical obligation of colleges and to be effective it must be aimed at changing behavior and repeated in different formats. He argued that the more effective the program, the more controversial it might be, because effective programs admit that there's explorational behavior by students.

Bridwell, who is president of ACHA, concentrates on educating campus faculty and staff because she feels they have to be comfortable talking to students and also feels that the law of averages would lead to faculty or staff getting AIDS first, just because they are older. She insists that waiting for people to walk in and ask about AIDS or simply advertising an AIDS seminar and waiting for people to show up does not work. Instead, she arranges one-on-one or small group sessions where attendance is more or less guaranteed: "Waiting for someone to ask to have a talk doesn't work...When I say, 'Gee, I'd like to come talk to you,' they say 'Come,' because they don't have to admit there's any reason they might need to hear about it" (Weiner, 1986, p. 107).

The executive director of the American Association for the Advancement of Health Education believes that AIDS education should be a part of the comprehensive school health program because education that is orientated to crisis-type situations is not any more productive than the typical education that is well thought out, planned, sequential, and is part of the planned curriculum of a school. He states: "I think you can understand that just to go in and do a response to a crisis is not as responsive as planning an educational curriculum" (Weiner, 1986, p. 101).

How prepared are university and college policy makers, administrators and staff to respond with such an educational curriculum? This question bears further investigation.

Are Professionals Ready to Respond Appropriately?

Backer (1988) states that AIDS does not only affect individuals. It also affects organizations, and to meet the many challenges of the AIDS health crisis, significant organizational change will be required in almost every area of human society. "Dealing with AIDS imposes burdens and responsibilities on government; employers; and professional, health care, community, and advocacy organizations at all levels" (p. 977).

Experts on AIDS make it clear that every school needs to come up with a policy on AIDS, and that policy must refer to medical expertise on the subject. As Weiner (1986) remarks, "That's easy to say, but not so easy to put into place...it takes strong leadership and guts" (p. 93). She quotes one researcher who interviewed dozens of college officials on AIDS preparation and found that many schools did not think they needed to act on the issue: "It's not going to happen here. Our students don't do those things" (p. 113).

The literature reveals a number of surveys where school officials, although confirming that AIDS education should be a regular part of the school curriculum, had no general agreement on how they should deal with other aspects of the disease (e.g., Keough & Seaton, 1988; Caruso, 1987; Wood, 1987).

Strouse (1988) sent out a questionnaire to all 256 school districts in the State of Oregon requesting information on policies towards students or personnel with AIDS. She discovered that an overwhelming number of districts had neither a written policy nor any sort of plan worked out to deal with AIDS should it occur in their areas. Most chose to adopt a "wait and see attitude, leaving policy-making to wait upon the occurrence of such an emergency" (p. 2). Strouse received a number of unique responses explaining why there was a lack of policy or curriculum, but the response which most forcefully exhibited the need for educating the public about AIDS came from an administrator who, when asked if a student was found to test positively for AIDS, how would your school district handle the situation, stated that they would send the AIDS-infected person to a hearing specialist!

Why is it that educators and administrators find it so difficult to talk about implementing AIDS curriculum and school policy? Mays (1988) thinks that it is our "lack of knowledge, and for many, our discomfort in talking or asking about the intimate choices of individuals" (p. 948). Although frank discussions in the media and schools are what is needed to define safe and unsafe practices, Suzuki (1987) agrees that "too often, however, prevention campaigns have been stifled by a distorted sense of morality and a squeamishness about such discussions in public" (p. 78).

Tolsma et al.(1988) stress the need for a qualified health education teacher with training and experience in adolescent development, education methods and materials for teaching about human sexuality, communicable diseases and drug abuse. They state that if a school has no such individual, then faculty with similar training and good rapport with students should be trained specifically to provide effective AIDS education.

Recently, Health and Welfare Canada (1989) issued a statement that policy makers who impact the aboriginal community must be convinced of the serious threat that the AIDS virus poses to their communities: "Continued denial by policy makers that AIDS exists among the aboriginal population will delay placing the issue at the top of the list of community priorities and needlessly delay the development of education and prevention measures" (p. 16).

The report recommended that human and financial resources be made available to support the education of policy makers and education authorities through participation in symposiums and conferences. It also advocated the development of tools designed to measure the knowledge, attitude and behaviour of the aboriginal population and youth in areas pertaining to high risk behaviours for HIV transmission.

Clearly, these recommendations make the statement that those who are concerned with education in Canada must get on with the task of designing and implementing effective AIDS programs. Chambliss (1987) advised colleges to take precedent and set an example for others. She states, "A college's ability to deal with its first AIDS case rationally could be very instructive for students. It can help to affirm an institution's values and its acceptance of the obligation to respect the rights of all students" (p.6).

The issues surrounding the implementation of effective AIDS education in our universities and colleges are indeed complex. The literature suggests that, for the most part, educators are not prepared to respond before an incident on campus occurs. Unfortunately, response to a crisis situation is often less than appropriate. McMillan (1986) urged colleges to head off panic over AIDS by setting policies in advance. Personnel directors were encouraged to (1) develop policies concerning AIDS as it relates to job applicants, personnel records and services (2) to counter unfounded fears among co-workers, and (3) to develop and coordinate educational programs within the institution.

Lack of Evaluation of Existing Educational Efforts

Although many educational programs have been conducted, there has been little, if any, evaluation of their impact. Has the epidemiology of the disease changed since the introduction of educational programs? According to the Royal Society of Canada (1988), the desire to establish fast-acting preventative programs has led a number of municipalities and governments to invest substantial funds in public education programs without including an evaluation component. "For this reason we do not know whether they have had any effect on the kinds of behaviour that spread HIV infection" (p. 19).

It is well known in the field of psychology that youth often have distorted views of their own vulnerability. Flora & Thoresen (1988) revealed that the perception to the threat of AIDS was no exception. Even after being exposed to valid information via the media, adolescents do not typically change their behavior. In fact, the authors cite a study in which the use of condoms actually diminished after exposure to AIDS-related material.

Several studies have shown that students do not seem to translate their knowledge of the dangers of HIV transmission into the practice of low risk behaviors (e.g., Gilbert, 1989; Loos & Bowd, 1989; Simking & Kushner, 1986). Edgar, Freimuth, & Hammond (1988) looked at the problem of motivating change in college students. Results of four studies conducted at American universities indicated that the majority of students were reasonably knowledgeable about transmission of the AIDS virus and proper preventative measures. Only a minority of students, however, translated their knowledge into behavioral change.

Recently, the results of a federally funded Canadian survey of approximately 7,000 first-year university and community college students found similar results. The report concluded that although "young adults are reasonably well-informed about STDs including AIDS...that knowledge has evidently failed to make them more cautious" (Hanna, 1989, p. 48). Most students surveyed said that they engaged in sex, but they acknowledged that they are reckless about taking the one precaution during sex that helps to prevent disease; using a condom. Consequently, many health authorities in both Canada and the United States say that they are concerned that, despite all the publicity about safe sex, the message is not affecting a sexually active sector of the population. Regrettably, the survey found that those most at risk were least likely to use condoms. Dr. N. MacDonald, an Ottawa specialist in infectious diseases reveals, "Most education and media campaigns to increase condom use are dismal failures" (p. 48).

A study done among American college students (Bowen & Michal-Johnson, 1989) on the effect of commmunication skills in negotiating sexual relationships found that "college students are talking about AIDS to some extent, but there are few indications that the quality of the talk is sufficient for a realistic negotiation of safer relationships" (p. 16). The study provided very little evidence that talk about AIDS was subsequently applied to the subjects' own relationships. The authors argue that the educational campaigns have had some impact because college students did talk about AIDS to their partners, but it was frozen at a distant, external level such as telling an AIDS joke. Students kept the talk casual and superficial which suggested that most individuals did not have the interpersonal skills to successfully negotiate safer sexual intimacy. The authors contend that educational efforts can only be described as successful if they produce real behavioral change. They concluded that "the most significant effect of the educational campaigns so far has been to raise levels of fear and concern rather than fostering preventative behaviors" (p.17).

Many delegates at the WHO's 4th conference on AIDS in

Stockholm stressed that, in light of the scant promise achieved in vaccine trials so far, education campaigns were not effective enough because they must provide more explicit information about how the disease is contracted (Underwood, 1988). But, one Western Ontario psychologist warns that too many sex-education courses focus on dry anatomical details. He says that it is like a driver-education course that only gives information about the workings of internal combustion engines: "If students do not practise how to behave when behind the wheel,...they are likely to be hurt or killed. As a result reckless sex is becoming just as hazardous" (Hanna, 1989, p.48).

There are others who also caution that too much knowledge may be ineffective. Tolsma et al. (1988) says that although information about the biology of the AIDS virus, the signs and symptoms of AIDS, and the social and economic costs of the epidemic might be of interest, "such information is not essential knowledge that students must acquire in order to prevent becoming infected with HIV" (p. 144). Conversely, they add, that a "single film, lecture, or school assembly about AIDS will not be sufficient to assure that students develop the complex understanding and skills they need to prevent becoming infected" (p. 144).

So, while it is repeatedly said that giving knowledge is our best weapon against AIDS, it appears that giving information about how HIV is transmitted is not sufficient condition to facilitate behavioral change. In short, prevention campaigns that are based almost exclusively on giving information are not likely to be successful.

What is essential, according to Morin (1988), is an accurate assessment of individual risks. However, he cautions that "threat" is not always accurately perceived. "This is particularly true among specific groups such as adolescents and ethnic minorities who may underestimate personal risk" (p. 839). This statement seemed to be confirmed by the Royal Society of Canada (1988). Its investigation discovered that people who are normally very cautious about their sexual relationships continue to be so, while those who are most at risk seem not to be much influenced by educational programs.

The report stressed that it was necessary to determine whether educational programs reach their targets, whether they had any impact on behaviour in either the short or the long term, whether they attain their goal by reason, fear or other means, and lastly, whether AIDS-related information in the media enlightens the public or leads it to scapegoat those groups that are believed to present a high risk.

The report also admitted that sexual activity is a personal and private matter not often amenable to logical constraints and therefore there were limits to what educational campaigns could achieve. However, it concluded that "education remains the main hope against AIDS until an effective preventative measure (e.g., a vaccine) or treatment is found" (p. 19).

It is findings such as these which lead some researchers to claim that educational efforts have been a lost cause altogether (e.g., Fineberg, 1988; Hughey, 1986). Silen (1987) stated that because AIDS has been construed as a disease of the "other" who is somehow not part of society, efforts at education are destined to fail; and Smith (1987) argued that many programs waste money by targeting middle class heterosexuals who, he maintained, are at a very low risk for the disease. Thus, these programs have only helped to spread more fear about AIDS. He advocated that funds for AIDS education should be directed specifically at high risk groups.

In conclusion, it can be said that many schools and community agencies have initiated AIDS education programs but few have been rigorously evaluated, particularly in demonstrating that these programs alter sexual behavior. Although adolescents and college students in general are at some risk of becoming infected with HIV, Flora & Thoresen (1988) state that "subgroups of poor, racial, and ethnic minorities are clearly at even greater risk" (p. 965).

An evaluation of possible risk-taking factors among heterosexuals is necessary in order to determine what would constitute an effective curriculum aimed at reducing high risk behaviors.

Factors Involved in High Risk Behaviors

Siegel & Gibson (1988) studied the barriers to the modification of sexual behavior among heterosexuals at risk for AIDS. Many at risk do not yet recognize their susceptibility or are not motivated to adopt behavioral modifications; circumstances that create the potential for significant spread of the virus in the general population. The researchers categorized the barriers into four areas which include (a) perceptions of low vulnerability, (b) misperception of the efficacy of adaptive behaviors, (c) barriers to the use of condoms, and (d) the stigma of the AIDS association with homosexuals. Indeed, the literature provides ample evidence of factors which can be generally categorized under these four major umbrella theories. Because a comprehensive evaluation of all possible factors involved in the barriers to modification of risk factors would prove exhaustive and beyond the scope of this paper, succinct samples of factors in each of these categories has been provided.

Perceptions of Low Vulnerability

"We are reluctant to acknowledge that bad things can happen to good people. We are even more relunctant to acknowledge that bad things can happen to us" (de La Rue & Ruback, 1987, p. 3). In a study on rationales of college students engaging in risky behaviors, de La Rue & Ruback (1987) found that "It will never happen to me" received the highest ranking among rationales. The findings of the study suggest that, "through a variety of means, risk-takers deny their at-risk role and thereby do not accurately assess the potential results of their behavior" (p. 3).

Perloff (1983) named this phenomenon the illusion of unique invulnerability. His theory indicates that those who have not been victimized by negative life events such as serious illness, accidents or crime, tend to perceive themselves as less vulnerable to victimization than others. In this way the ego defends itself by reducing fear, anxiety and stress that are normally associated with victimization. It also allows individuals to engage in behaviors that put them at greater risk for harm and still maintain an unrealistically optimistic belief about the possible outcomes of their behavior. de La Rue & Ruback suggest individuals who smoke cigarettes with no increase in anxiety regarding their smoking behavior are a good example of such a phenomenon. They point out that "ironically, by this defensive denial of their risky behavior, individuals who consider themselves uniquely invulnerable, are in fact uniquely vulnerable to victimization" (p. 4).

Brooks-Gunn, Boyer, & Hein (1988) suggest another reason for young adult risk-taking may be due to developmental limitations in cognitive abilities where thinking is typically concrete, egocentric, and not particularly future-orientated. Abilities to consider the future, to anticipate consequences and decisions, and to integrate specific knowledge into coherent systems are all affected. This theory would account for the issue of control in rationalizing risky behavior as determined also by deLa Rue & Ruback (1987). They stated that individuals may either believe that they have no control over their own actions, as might be the case with excessive drinking or impulsive sexual encounters, or, individuals might adopt a fatalistic attitude towards future life events. That is, they may believe that what will happen, will happen.

In 1987, Bauman & Siegel found gay men also had a tendency to underestimate the risks of one's high risk practices. In addition to the sense of invulnerability and management of anxiety through denial found in the above studies, the authors determined an unrealistic sense of optimism in the infallibility of the medical profession and poor risk judgments of sexual activities. It is to the factors behind these poor risk judgments we now turn.

Misperception of the Efficacy of Adaptive Behaviors

In a survey of over 500 college students to determine factors affecting AIDS risk-taking behaviors, Baldwin & Baldwin (1988) found that safer sex practices were not influenced by either religiosity or having had a course on AIDS. Instead, an individual's perception of factors such as the use of condoms, the number of sexual partners, and the understanding of the term "casual sex" determined the value of lifestyle habits and social responsibility.

A recent Canadian survey of first-year college students (Loos & Bowd, 1989) found that although half of the students claimed that they were practising "safer sex", many were either misinformed or not sufficiently modifying their sexual practises to warrant the term "safer" behavior. Thus, the authors state that AIDS education programs at the university level should address attitude and skills development through simulations, group interaction and other activity-based instructional methods in order to attain valuable interpersonal skills.

Findings by Bowen & Michal-Johnson (1989) confirm the need for skill development in practising adaptive behaviors. They suggest that most individuals do not have the interpersonal skills necessary to successfully negotiate safer sexual intimacy. They believe that training in communication skills is necessary to negotiate sexual relationships. A crucial goal in the training would be to build individuals' self-esteem to empower them to take responsibility for adaptive behaviors.

Their study asked college students the reasons for not discussing AIDS with partners before engaging in sex, despite the fact that they were quite knowledgeable of the need for such a precaution. The researchers found ample evidence of what appears to be irrational behavior taking precedence over logic. However, individuals seem to perform their own cost-benefit analysis when deciding whether or not to continue a risky behavior or to acquire a protective one.

The primary reasons for not addressing AIDS in the context of the relatinship were: (1) feeling embarrassed; (2) worried about the effect it would have on the relationship by insulting or offending the partner; (3) afraid of destroying an intimate mood and killing the heat of the moment; (4) a general fear of the partner's past promiscuity and the chances of contracting AIDS; and that (5) the relationship was not seen as serious enough to warrant talk about such a serious issue.

The authors comment that the reason some students did not talk about AIDS with a partner because "it was a one-night stand," or "it was just a casual sexual relationship. I didn't even know her last name," seemed to be the ultimate irony because "it is these very sorts of relationships, where individuals are unable to assess risk, that the risk may be the greatest" (p. 15).

Barriers to the Use of Condoms

The literature abounds with studies revealing the disappointment in compliance to the use of condoms (e.g., Talbot, 1990; Staff, 1989; Mark, 1987). Dienstbier (1987) reported that 83% of a sample of women vacationing at Daytona Beach who were surveyed by a condom company were aware of the usefulness of condoms in preventing the spread of STD's, but only 24% of that sample planned to use condoms. More recently, a Canadian government survey of college and university students (Hanna, 1989), discovered that most students were still reckless about practising safe sex and using condoms. One-third of those polled said they found buying condoms embarrassing, 20% were shy about discussing them with their partners, and many respondents also expressed the belief that condoms diminish sexual pleasure.

The reasons for failure to use condoms are myriad and cross a wide spectrum throughout the world. In some countries it is against the law for women to carry condoms (Talbot, 1990) whereas in sexually tolerant France, the AIDS scientist Jean-Luc Montaigner laments, "We've tried everything to make the French understand they have to be careful, take precautions, use condoms. It failed" (p. 44).

The best that can be said about instructing individuals in the need for the proper use of condoms is that different groups may require different information packaging. To illustrate this principle, Dienstbier (1987) noted that college students will more readilty come to lectures about "human sexuality" than to lectures about "AIDS". This implies educators should know their target groups on an intimate level in order to determine the specific needs of the group.

The Stigma of AIDS Association with Homosexuality

Although targeting groups may be useful for AIDS education, Reinisch, Sanders, & Ziemba-Davis (1988) caution the dangers of the concept of risk groups. It may lead some people not to identify with these groups, (but whose behavior puts them at risk), to believe AIDS does not affect them. Another argument against labelling certain groups of people as "at risk" is that it can not only lead to the belief that everyone outside of those groups is safe, but also to the belief that everyone in such a group is likely to be infected. For instance, "because of over half of the women with AIDS in the United States are black, the belief may arise that every black woman is at risk or infected" (p. 17).

This phenomenon is undoubtably what has occurred with the scapegoating of homosexuals. In 1987, a study by Hirschorn revealed that the most apparent roadblock to reaching the college-age population was the widespread belief that AIDS is a homosexual disease. Other researchers have also found that college students did not assess themselves to be at risk because they perceived the association of AIDS with homosexuality (e.g., Edgar et al., 1988).

As David Suzuki (1987) aptly warns:

> "It is deceptive to speak about risk groups. Members of high-risk groups can easily become stigmatized, while others convinced they are not at risk have a false sense of security. It is not who people are, but what they do, that puts them at risk. The AIDS virus infects those who engage in risk behaviour" (p. 75).

Young adults must be encouraged to openly discuss their feelings regarding some of the ethical issues revolving around many of the factors behind risk behaviors. Suzuki is adamant that schools must be the crucial target for AIDS educatinal campaigns because the strategy in schools is to teach students about safe sex behaviors **before** they initiate sexual behaviors which become habitual. To those who are indignant towards sex education in schools, he explains that this "is like learning the hazards of smoking before you're old enough to smoke. You never hear the argument that anti-smoking campaigns encourage smoking" (p. 78). Nevertheless, despite his reputation for sound logic, there are many who remain opposed to explicit sex education in schools.

What to Teach? Morality Versus Sex Education

Talbot (1990) recently put forth that AIDS education is an ideological battlefield. "Advocates of social tradition are trying to use the plague to enforce their moral convictions, while proponents of sexual modernism have seized the opportunity to expand the public's parameters of tolerance" (p. 41). He argued that AIDS education all over the world has become enmeshed in political, cultural, and religious agendas that can greatly complicate efforts to stem the epidemic.

One American educator named Sroka, who has designed his own curriculum guide and materials on how to teach students about AIDS, says that to do so "is like walking through a minefield" (Nemeth, 1987, p. 8). He finds that local school boards are skittish about instruction that does not emphasize abstinence or that is too explicit. But he argues that "relying on the 'complete abstinence' message leaves out the sexually active teenager and materials that focus on high-risk behavior alone don't give kids the option of, or skills to say no to sexual involvement" (p. 8). He adds that abstinence will work but getting people to abstain is a whole lot more difficult. Therefore, designing a program around abstinence "assumes that people will follow recommended behavior, which we clearly know is not true" (p.9).

The United States past Surgeon General, E. Koop, remarked that "from a public health point of view, the best defence against AIDS is total abstinence" (Nemeth, 1987, p. 10). However, the nation cannot ignore the fact that 50% of teenagers are sexually active by the age of 16. For those who are already sexually active, Koop added, "I have to introduce such things as condoms, though it may offend the sensitivities of some" (p. 10).

Offend some it does. The literature provides several examples. Clark (1988) reports that education, although a crucial component in any attempt to prevent the spread of HIV infection, was no simple matter when dealing with a subject as personal and controversial as sexuality. He points to the example of Britain where the government launched an explicit AIDS-awareness blitz throughout the media. The program met with some opposition as certain clergymen maintained that chastity is the only answer to the AIDS problem and state that advocating the use of condoms would "only lead to an increase in the same type of promiscuity that they believe created the problem in the first place" (p. 18).

Gifford-Jones (1987) also commented on how churchmen of various faiths and others contend that preaching safe sex is wrong because this message promotes permissiveness and there is enough free sex already. "They feel that the only way to stamp out AIDS is by a return to the old biblical restraints on sexual behavior; in essence, they feel that no sex before marriage is the solution" (p. 1). He also reminds us that the Roman Catholic church has always condemned the use of contraceptives of any kind and that so far, they have no plans to consider the use of condoms to prevent the spread of AIDS.

Several articles urge Catholic schools and colleges to accept the fact that young adults are a high risk group, recognize the need for AIDS education, and respond by adopting a moral stance rooted in gospel values (e.g., DeMartini, 1987; McNamee, 1987).

More seriously, there are those conservatives who believe that AIDS is a punishment for immoral actions. They object to AIDS education because it teaches sexual material that should be learned in the home. But, as Garvey (1987) muses, children learn more about sex and values from the media than their families and therefore AIDS education is necessary.

Interestingly, many of those who do not support sex education support teaching students about AIDS in the hopes that it will frighten students into not having sex outside marriage. Weiner (1986) quotes one concerned parent as saying that schools should not make the same mistake that they did with drug education and get into value clarification and let the students decide whether or not to use drugs: " Supposedly the classroom teacher is value and moral-free, that's what's wrong with all those stupid courses. Scare tactics would perhaps dissuade children from engaging in sex prematurely" (p. 99).

But Keeling (1989) argues that we expose our children to sexuality every day because we use sex to sell lots of things in North America. He finds it remarkable that "some people oppose explicit AIDS educatin on the grounds that it might encourage sexual activity in people who otherwise would not have thought of it" (Biemiller, 1988, p. A22). Similarily, the Indianna state health commissioner said that schools and parents must get over their hangups about sexuality. "The problem is we are uncomfortable with sexuality. On the one hand we use it to promote products. On the other hand, we're afraid to deal with it. We can put AIDS curriculum in schools if we can just over our phobias about sex" (Weiner, 1986, p. 100).

Despite the rampant use of sex to sell products in America, the United States Department of Education (1987) put out a guide for teachers and parents which stresses restraint and moral values as the best procedures for avoiding AIDS. In his report before a government hearing, Mark (1987) said that two themes must be stressed when instructing adolescents. First, that abstinence before marriage is normal and second, that fidelity after marriage is expected. He cautioned that opponents of traditional morality will argue that this is a form of repression, a return to prudish Victorianism:

> "They will claim that it is unreal in this day and age to expect the young to deny their sexual urges. Their program, however, has been a failure and it has lead us to the brink of catastrophe ....Do we want to waste our limited resources on a program of explicit and permissive sex education in the high schools that will inevitably prove ineffective? (p. 85).

On the other end of the spectrum, there are those who argue that instead of promoting safe sex, the government's current AIDS campaign attempting to sell the nation's youth on the joys of sexual abstinence, is also a waste of time and money. Talbot (1990) states, "Millions of taxpayers' dollars have gone into programs with titles like 'Saying No and Meaning It'. Nonetheless, a majority of American teenagers continue to say yes" (p. 42).

The Royal Society of Canada (1988) appears to take a very realistic stand. Its report makes a special point about education programs designed to reduce the sexual transmission of HIV. "Given that the sexual drive is one of the most powerful impulses of the human adult, simple programs promoting abstinence are of limited effectiveness" (p. 19). The report advocates that programs be presented in candid and explicit language, not using terms like "exchange of body fluids"; address issues such as the use of condoms and the sharing or cleaning of injection equipment; and develop negotiating skills that are necessary to change behaviour in difficult, inconvenient or confrontational circumstances.

An editorial in the Globe and Mail (1987) stated that abstinence is, without a doubt, the most effective measure against HIV infection, but the majority of people cannot realistically be expected to abstain. The editor proposed that:

> "Recognizing the facts is not immoral. Pussyfooting around the causes of AIDS is immoral, and this prissiness has cost people, heterosexual and homosexual, their lives. Detailing in a professional manner the dangers of high risk sexual activities and sharing needles is not going to encourage promiscuity and drug abuse, it is going to spread common sense and save lives" (p. A5).

Weiner (1986) concluded that whether or not schools had an existing sex education course, they must include AIDS education in their curricula.

Finally, Bowen & Michal-Johnson (1989) recognize that while these proposals are guaranteed to incite those who oppose sex education in schools, the AIDS epidemic is now expanding in such proportions that "we can ill afford the luxury of debating the moral implications of such programs" (p. 18). However, they also recognize that these educational programs are much easier to recommend than to implement because they are frought with logistic complexities and it is only the maverick policy maker who would dare to operationalize them. Yet it must be done. The prospect of losing millions of lives before this century is out mandates risk taking on the parts of educational and public health officials.

Tailoring Programs for Specific Target Groups

We have seen that the vast majority of AIDS educational curriculums have lacked evaluation of their effectiveness, particularly in demonstrating that these programs alter sexual behavior. In addition, many of these programs are not well grounded in theory that integrates the information, understanding, and skills training needed to bring about change in sexual activities. Flora & Thoresen (1988) explain that very little attention has been paid to date about possible ethnic, racial or gender differences concerning how material is presented, different meanings that information may have for various groups, and possible barriers to understanding and behavior change that may be involved.

The researchers point out that although young adults share many characteristics, genuine differences exist between male and female adolescents as well as between socioeconomic groups. Each group may differ in their values, attitudes, skill and information levels, and social contexts, with respect to sexually related behavior. "Clearly, programs must be more carefully tailored in terms of gender, ethnicity, and possibly social demographic differences between students" (p. 966).

Reinisch et al.,(1988) argue that failure to employ the language and symbols used by each of America's ethnic, racial, social, age, regional, and sexual orientation groups will result in erroneous information and handicap effective intervention. Equally important is the necessity to examine the ways in which the values of the Canadian people are embedded, maintained or changed in their social and cultural life. In its report, the Royal Society of Canada (1988) stated:

> "Our society is distinct from similar societies such as the United States. It is these values and culture that must be understood if Canadians are to change their sexual practices, sustain those who have AIDS or who are carriers of the virus, and educate their young people about risks (p. 23).

Sexuality, they continue, is a private matter in society and one deeply rooted in cultural and religious practices. Therefore, it is not easily amenable to change by the outside, or even within, a group.

Various groups use rationalizations to behave in a way that makes sense to them in the social context of their lives. Thus, they resist hearing certain facts or news about diseases such as AIDS and fail to modify their behavior. Rational behavior in relation to health varies significantly among subcultures.

One of the most common arguments for tailoring AIDS educational programs comes from the perceived decrease in high risk sexual behaviors among the homosexual community (e.g., Klein, Sullivan, Wolcott, & Landsverk, 1987; Bradford, 1987). But, Baum & Nesselhof (1988) aptly point out that just because historically, male homosexuals and IV drug users have been the highest risk groups in North America, does not mean that these two subculture groups are not differentiated by a number of variables and therefore, the same educational style, focus, content, or source may not prove an equally effective intervention campaign with both groups.

Dienstbier (1987) goes one step further. He claims that it is wrong to categorize together members of different stigmatized subgroups. "There is not a single culture of gay men. Differences in underlying values, languages, literacy levels and economic levels mean that many different approaches and different messages will need to be developed" (p. 11).

Other researchers also expose the fallacy of our assumption that effective intervention programs are similar for all subgroups (e.g., Bowen, 1989; Tolsma et al., 1988). In their research of ethnic women's groups, Mays & Cochrane (1988) found that for some Black and Latina women, the behavior change of using condoms must be viewed as more important than their religious doctrines. In some ethnic minorities, children represent potential cultural survival of the group. In this respect, during the 1970's, Blacks viewed the use of contraceptives as a form of ethnic genocide promulgated by Whites. The ability to reproduce was seen as a powerful tool to fight liberation. Viewed in this light, it is not surprising to discover that some ethnic minority women experience physical and verbal abuse in response to their requests that their partners use condoms. Therefore, public health messages requesting women to discuss sexual practices and condom usage with their partners before sexual involvement, do so in ignorance of the cultural norms governing sexual behavior.

Mays & Cochrane also point out that for the prostitue sex is money, and unsafe sex is often more money. "In our risk reduction advice, we have not offered the sex industry worker an economic substitute should she choose abstinence. For her, safer sex may already be a compromise" (p. 952).

Similarily, "IV drug use is not a simple autonomous behavior, but rather a pattern of behaviors often deeply embedded in a subculture that has its own values, roles and status allocations" (p. 952).

Obviously, research to determine what information is effective in reducing high risk behaviors within groups should be undertaken, as well as research to establish the most effective manner of disseminating that information. And in order that other programs can benefit from what is learned, the planning, conduct, and evaluation of targeted prevention programs for specific groups need to be well documented so that other programs can benefit from what is learned. Too little attention or emphasis has been directed toward what we have already learned are essential components of behavior change programs (Morin, 1988).

Some of the more innovative examples come from other countries where intervention efforts have been presented in a cultural context. Talbot (1990) cites carnival songs in Trinidad, a safe sex Punch and Judy puppet show in the streets of South Africa, where half of the country's black population is illiterate, and the condom ads painted in bold white letters on the sides of elephants in Thailand. Not to be outdone, the Australian government is taking advantage of the popular American heroes, Superman and Batman, and have designed a comic book hero known as "Condoman" to encourage sexually active Aboriginal men to use "frenchies", a slang term for condoms (Laver, 1988).

Chapter Summary

Educators are frought with a complexity of issues surrounding the implementation of effective intervention campaigns designed to curb the spread of HIV transmission. However, adolescents and young adults have an alarmingly poor track record in sexual health matters. STDs and particularly AIDS are uncomfortable to hear about, talk about, and think about, especially for those who are squeamish or who find it morally offensive to do so in public. Information must be presented with sensitivity.

To overcome some of the cultural and developmental hurdles, advocates of these programs have suggested a wide variety of strategies in an attempt to determine what is most likely to impact individuals to reduce high risk behaviors. This review of literature has shown that when presented with AIDS information, young adults can readily learn facts about the transmission and prevention of the disease. Unfortunately, the majority of studies have also found that this knowledge is rarely translated into low risk behavioral changes.

Theories abound as to what constitutes an effective intervention program in ensuring attitudinal changes towards low risk behaviors and an increase in compassion for those either afflicted or just perceived to be afflicted with AIDS. This literature review suggests that AIDS educational programs must be specifically targeted to the cultural and developmental needs of the group and that practical strategies for developing interpersonal skills are necessary to decrease irrational fears and increase one's sense of control over his/her life.

King et al., (1988) concluded that young Canadians are anxious about AIDS and are eager for more information. "Now is the time for dynamic education programs to help them develop appropriate attitudes and adopt safer behaviours with respect to AIDS and other sexually transmitted diseases" (p. 31). By empowering individuals with both a sense of caution and a sense of control, perhaps educators can put a rein on this serious epidemic.

Research Hypotheses

Having completed a review of the current literature on AIDS education and designed an AIDS curriculum relevant to the specific group of predominantly aboriginal college students at the Thebacha Campus of Arctic College in Fort Smith, this investigation proposed to test the following three hypotheses:

1. College students who receive a comprehensive AIDS prevention program will score higher on knowledge about HIV transmission than the control group of subjects who receive no program.

2. Subjects in the treatment program who address the issues involved in HIV transmission will show a more positive attitude towards the practice of low risk behaviors than those subjects in the control group.

3. Students who receive a comprehensive course about HIV transmission and prevention will show a more compassionate attitude towards those infected with the AIDS virus than the control group of subjects.

Operational Definitions

For the purpose of this study the terms below were operationally defined as follows:

comprehensive AIDS prevention program: a seven lesson course on acquired immune deficiency syndrome targeted towards predominantly aboriginal college students which took place over a period of eight weeks. The course was designed to provide factual information, encourage the adoption of low risk behaviors and a compassionate attitude towards AIDS sufferers, explore cultural issues to allow for the clarification and expression of personal values, and employ practical strategies to develop the interpersonal skills necessary for effective decision-making (See Appendix E for outline).

aboriginal college students: those students of Dene, Metis and Inuit ethnic background who attend the Thebacha Campus of Arctic College in Fort Smith, NWT. (It should be noted that this is a very broad term which encompasses numerous ethnic subcultures within itself - each of which could be considered a specific target group.)

knowledge about HIV transmission: the correct response to 21 items (#32 to #53 excluding #45) on the university/college version of the instrument entitled Canada Youth and AIDS Survey (1988).

attitude towards low risk behaviors: behaviors which carry little possibility of contracting the AIDS virus such as wearing a condom with a spermicide when engaging in sex with someone whose sexual history (previous 5-10 years) may put you at risk of HIV infection, limiting the number of sexual partners, use of sterilized needles or syringes for IV drug use, tattoos, and ear piercing in order to avoid contact with contaminated blood or blood products. (See Appendix C for measurement of this variable).

compassionate attitude: tolerance towards those infected with the AIDS virus regardless of the reason for contraction of the virus (e.g., haemophiliacs infected by unscreened blood, a child born from an infected mother, IV drug users, or those who engage in high risk sexual behaviors).

III. The Investigative Procedures

This chapter is an overview of the investigative procedures that comprise this experimental study. Information is provided in regard to the subjects, the measurements, and the design of the study. As well, a general outline of each lesson involved in the course is presented in order to ensure the possibility of replication. Copies of the curriculum may be obtained by writing to the author.

Subjects

A total of 123 first and second year students attending the Thebacha Campus of Arctic College in Fort Smith, Northwest Territories (NWT) comprised the sample. The Fort Smith site is the oldest of the six campuses situated throughout the NWT which offer a variety of diploma programs. The 49 male and 74 female students in the sample were enrolled in one of eight of the following areas: academic studies, secretarial arts, renewable resources, public and business administration, teacher education, heavy equipment operation, social services, and community counselling.

Students in the sample represented 29 different communities throughout the Northwest Territories. The majority (82%) were of Aboriginal descent (i.e., Dene: 38%, Metis: 24%, Inuit: 20%). The student population tends to be older than that of many colleges (mean = 29 years) having spent, on the average, almost 10 years out of school. Most students had completed either grade 10 or had achieved some form of upgrading to this level. Over half of the students (56%) were either married or living common law. One-third of the sample was single (32%). Approximately half of the students (46%) had children.

Background Behavior

Approximately two-thirds (67%) of the students smoked cigarettes and three-fourths of the students (77%) reported using alcohol. Of those who drank, almost half (45%) said they consumed five or more drinks at one time. In contrast, 70% stated that they had never used cannabis.

Of those who responded to the question, only one student reported having a homosexual preference as opposed to a heterosexual preference. The mean age of first sexual intercourse was 15-16 years old but one-third (31%) of the respondents had intercourse at a younger age. Only one-fourth (26%) reported "love for the person" as the main reason for engaging in intercourse. Other notable reasons were "curiosity" (20%), "physical attraction" (17%), or "under the influence of alcohol or drugs" (10%). Almost half (43%) said that either "physical attraction" or "getting carried away by passion" were the secondary reasons for intercourse.

The ratio of males to females was different between the control and experimental groups. The control group had a ratio of 2 males for every female whilst the experimental group had a ratio of 5 females for every male. This discrepancy may account for the notable difference in the average number of sexual partners reported by the two groups. Two-thirds (67%) of the experimental subjects stated that they had five or less sexual partners whereas a similar number (61%) in the control group had 10 or more partners. Of this group, about one-third (30%) reported having 30 or more sexual partners. In other words, it appears that the experimental group, which was predominantly female, reported themselves far less promiscuous than the predominantly male control group.

A second, although less predominant difference between the two groups was the mean number of hours already spent learning about AIDS through various media and/or lectures. The control group reported approximately 2 hours more learning time (9 hours) than the experimental group (7 hours).

The use of protective devices against either conception or the AIDS virus was extremely rare. Most students (90%) had never used a condom and spermicide to prevent AIDS nor had 86% to prevent pregnancy. Even without the use of spermicide, 60% had never used a condom to prevent AIDS and only 17% used a condom either "always" or "most of the time" to prevent pregnancy. Moreover, 85% had never used the rhythm method, the diaphragm (84%), or withdrawal (71%) to prevent pregnancy. The most widely used method of contraception was the pill as 50% used it either always or most of the time. When asked the reasons for not protecting partner was monogamous and did not have either AIDS or an STD. However, approximately one-fifth (18%) of the predominantly male group responded with some type of anti-condom sentiment or an ignorance towards the cause of AIDS or STDs.

Group Assignment

Permission was obtained from the Dean of Instruction at Thebacha Campus to ask various college instructors for their cooperation in having their classes participate in the study (Appendix A). Thus, individual students could not be randomly assigned to either the control or experimental groups as they were intact classroom groups. However, every effort was made to ensure as many programs as possible were included in the study in order to obtain a large representative sample of the college population. Eight classes were involved. Assignment to either control or experimental group could not be considered purely random as it somewhat depended upon whether or not the classroom instructor was willing to give up enough instructional time for the AIDS course. If not, that class had to be assigned to the control group. A total of 67 students in the experimental group and 56 students in the control group responded to the pretest questionnaire. Although students were encouraged to participate by explaining the value of their input, a few chose not to respond to the entire questionnaire. At the time of the posttest questionnaire a number of students had been lost to attrition. The experimental group had 53 students remaining. Seven had left the college and returned home for personal reasons (financial, alcohol related, family problems) and 7 had dropped out of the course due either to time restraints or because "the questionnaire was too personal". Because the control group was not given the AIDS course, they were offered a lottery ticket for completing the posttest questionnaire. A total of 41 students responded. Nine had left the college due to personal reasons and 6 chose not complete the questionnaire.

The Instrument

Knowledge of AIDS/STDs and attitudes towards those either with AIDS or just perceived to carry the AIDS virus was measured using a slightly modified version of the 1988 Canada Youth and Aids Survey (CYAS) in order to determine specific demographics of the sample of college students in the Northwest Territories. Of the six versions of the survey, the university/college questionnaire was used (Appendix B). The survey instrument contained questions about respondents' background (age, gender, socioeconomic status, parents' origin); sources of information (on sex, birth control, AIDS, other STD's); behaviours (use of alcohol, tobacco, and other drugs; sexual activity); and knowledge about AIDS and other STD's. The items were developed by a research team from Queen's University in Kingston, Ontario, in collaboration with advisors considered to be knowledgeable about AIDS and other STD's and with the advice of officials from the Federal Centre for AIDS and the Laboratory Centre for Disease Control in Ottawa.

The questionnaire had been given in 1988 to over 38,000 Canadian youth in grades 7,9,11 and first year college and university. Also included in the total were those who had recently dropped out of full-time attendance at school, and those who spent most of their time on the streets of large cities. The purpose of the federally funded national survey was to assist those Canadians developing and implementing appropriate educational and social programs to prevent the spread of sexually transmitted diseases among adolescents and young adults. Six scales focusing on self-esteem, mental health, relationship with parents, relationship with peers, attitudes towards homosexuality, and people with AIDS or HIV infection provided the items for the questionnaire. The scales in the study, although they have much in common, stand as independent concepts.

A detailed description of the scales involved in the questionnaire can be found in the study's technical report.

Likert-type response keys on attitude items were most appropriate to facilitate completing the items in the shortest period of time. A five-choice key was used: strongly agree, agree, uncertain, disagree, strongly disagree. Knowledge responses had a three-choice key: yes, no, do not know.

Validity and Reliability

Those structuring the questionnaire were guided by recognized principles of effective item design. For the attitudinal scales, analysis of correlational matrices and Cronbach's alpha provided a measure of item consistency. The scales used in the questionnaire have a smaller number of items than most scales developed for measurement purposes. A minimum alpha of .65 determined sufficient item homogeneity.

The knowledge items were based on pre-pilot and pilot studies using a questionnaire followed by a discussion of AIDS-related issues. Multiple concepts in an item that could produce more than one response were avoided so that the single concept being tested was clearly specified. Threatening questions were avoided and colloquialisms and slang used only to replace more formal or technical words not likely to be understood by all respondents. Problems associated with the readability of the survey items were identified by asking pre-pilot and pilot focus groups to underline words they found difficult to understand and to place a question mark beside items that proved confusing. Throughout the design stage, this process was repeated with students until the surveys presented very minor problems.

For the purposes of the first research hypothesis in this study, all the items except one were used in the knowledge section of the questionnaire. The response which was not included in the data was the controversial item (#45) pertaining to whether or not HIV can be passed from a mother to her infant through breast feeding.

The remaining two hypotheses were measured using selected items from the views section of the questionnaire (# 54 to # 161). Two college educators, two business people and one health instructor were given all the items and asked individually to select only those items which they felt related most appropriately to each hypothesis. An 80% agreement set the minimal requirement for item selection for each hypothesis. (Specific items for each of the three hypotheses are shown in Appendix C).

Administration and Scoring of Questionnaire

Due to the fact that the questionnaire took approximately one hour to complete, instructors of each class were asked to select a convenient date within a one week time frame in order to administer the pretest questionnaire. The same procedure occurred during the posttest. Therefore, all classes received the instrument within a few days. At the time of the pretest, students were asked to sign a consent form (Appendix D). No time limit was set for subjects completing the questionnaire. In order to obtain the mean of correct knowledge responses, items #32 to #53 excluding #45 were hand-scored. Subjects had a three category response option: yes, no, don't know. Of the 21 knowledge items, the correct response for 13 items (32,34,37,39,41,42,43,44,46,47,48,49,52) was 'yes'. The eight items which had 'no' as the correct response were (33,35,36,38,40,50,51,53).

Items for the two remaining attitudinal hypotheses were also hand-scored using a five category likert-type response option: strongly agree, agree, don't know, disagree, strongly disagree. Of the 16 items used to measure these hypotheses, eight of the questions (55,66,92,110,129,135,146,147) were scored in the direction of five to one. The remaining eight questions (70,75,112,121,130,142,152) were scored in the direction of one to five. The mean score was then calculated for the experimental and control groups on both the pretest and posttest questionnaires.

Design of the Study

This experimental study was a pretest-posttest control-group design with eight intact classes of subjects nested within the groups. The independent variable manipulated was attendance throughout a comprehensive course on AIDS. The three dependent variables measured were the subjects' knowledge of AIDS, attitude towards AIDS risk-taking behaviors, and compassionate attitude towards those infected with HIV. The dependent variables were measured using the CYAS questionnaire, a likert-type response option instrument.

Study Procedure

All subjects were asked to provide their consent to fill out the pretest questionnaire. Names were not requested, but a number was assigned to each person in order to be able to match up the subject with his/her posttest questionnaire. Following this procedure, an eight lesson course on AIDS and STDs began for those enrolled in the experimental group. The control group received no treatment other than their regular classes. At the time of the posttest 10 weeks later, the control subjects were given a lottery ticket in appreciation for again completing the questionnaire.

Because the experimental group consisted of four distinct programs or classes, it was necessary to be flexible regarding the actual time allotment given for each lesson among the particular classes. For example, sometimes two lessons were given at once in a longer period of time instead of one lesson per week for two weeks. However, since the basic course was given to each class within the experimental group, it was felt that this would not have a significant outcome on the dependent variables.

The duration of each lesson was approximately 1½ hours long. Information was gathered from numerous resources such as books, magazines, newspapers, pamphlets, educational or government reports and presented on overheads and in xeroxed booklets. Relevant videos were shown throughout. All lessons involved both a didactic and experiential component so that there was input from the instructor as well as feedback from the subjects. Students were encouraged to express their opinions in a candid manner both verbally and through anonymous written mini-polls. Because the approach was to consider all viewpoints when delving into a controversial issue, the outcomes of these polls were shared with the subjects in a nonjudgmental manner (i.e., there was no "right" or "wrong" opinion). A breakdown of the 10 weeks of the study is as follows:

Week One

Administration of consent forms and the pretest questionnaire to both experimental and control groups was undertaken. It was explained to the experimental subjects that their input in helping to design the course was considered valuable. Therefore, a box was provided for them to anonymously write down any questions they wanted answered in the course and to comment on possible areas of interest they felt would be beneficial to the course. This box was always available to the students throughout the course in order to have continuous input in a nonthreatening manner. These questions and/or suggestions were later incorporated into the lessons. This method was in agreement with the current literature review on AIDS education in that the curriculum was designed as required for the specific target group. Thus, aboriginal resources were employed as often as possible (e.g., posters, pamphlets or videos depicting the aboriginal perspective). A course outline including references can be found in Appendix E.

Week Two: Lesson #1

The first lesson focused on the definition, origin and symptoms of AIDS, the seriousness of the pandemic, and the transmission and prevention of HIV. Several overhead graphs were used to depict the information in a visual mode in an attempt to enhance the learning situation. Care was taken so that current statistics and reputable facts from reliable sources were used. A list of resources where accurate information about AIDS could be obtained in the NWT was distributed as well as a large handout (booklet) on the basic questions and answers commonly asked about AIDS. The session ended with the viewing and discussion of the video narrated by Whoopi Goldberg entitled, AIDS: Everything You Should Know.

Week Three: Lesson #2

The second lesson began with an impromptu review in the form of an oral quiz on the previous week's information. Again, in an attempt to make the lessons enjoyable and nonthreatening, subjects responded as a group orally and were given praise and encouragement for their responses. Formal evaluation in the form of grades was never considered and subjects were made aware of this from the beginning of the course.

The lesson focused on the immune system and how it was affected by the AIDS virus. The definitions of viruses versus bacteria, how HIV attacks the immune system, an understanding as to why there is, as yet, no cure for AIDS, preventative vaccines and treatment drugs were all considered. The controversy surrounding the use of experimental drugs was followed by a discussion of the issues involved (e.g., should federal drug regulations be relaxed to allow HIV carriers the chance of finding a drug that may promote their well being?). A mini opinion poll was taken to allow students to anonymously express their personal views (Appendix F). The session ended with the video narrated by David Suzuki entitled, Facts About AIDS.

Week Four: Lesson #3

This lesson again began with a similar review quiz on the previous week's learning. The poll results were analyzed in the form of group percentages and praise was given for expressing one's opinion so that the information could be shared with the group.

The lesson focused on testing for the AIDS virus. The common concerns expressed by others such as who should be tested and where one would go to be tested were considered. The implications regarding possible test results were also discussed as well as the ethical issues behind an individual's rights of confidentiality versus a society's rights to be protected. Also discussed was the logical and compassionate reasoning behind government policies such as that stated in the AIDS component of the Department of Education, Government of the Northwest Territories (GNWT) health curriculum that neither an HIV infected staff member nor student would necessarily be excluded from attending school and that "only the child's family and the physician will know about the case" (1988, p. 53).

The session ended with a video review from the November 1988 CBC program "Focus North" regarding the controversy surrounding the Minister of Health's admonition to the Baffin Regional Board of Health for its unauthorized announcement that two people of opposite sex had tested positive for the AIDS virus in their region. The merits of that announcement were then debated.

Week Five: Lesson #4

The lesson began with a group oral quiz reviewing the information from HIV testing. This session focused on a) sexually transmitted diseases other than AIDS and b) the controversy surrounding the use of condoms.

Some of the more common types of STDs were presented (e.g., chlamydia, gonorrhea, herpes, syphilis) along with their symptoms and the various treatments available. STDs were considered as a very old problem with new variations. The STD epidemic was understood historically by the advent of the Pill which brought on a sexual revolution due to the decrease in fear of unwanted pregnancies. Common sense prevention was stressed (e.g., using a condom properly, limiting the number of sexual partners, washing with soap and water after sex, regular medical checkups). Graphs were shown to depict the high incidence of STDs in the NWT as compared to the rest of Canada and a plausible scenario was read which portrayed the relative ease with which HIV could be spread throughout the NWT (Department of Health, Government NWT, 1988, p. 4).

A discussion on the controversy surrounding condoms followed. Areas considered were advertising in the media and the merits and potential problems of placing condom machines in high schools. Several items from newspapers were provided as evidence of the severity of the debate amongst students, parents, educational staff and administrators. Samples of the GNWT's condom advertisements found in local northern newspapers were shown and analyzed in terms of their effectiveness in reaching the aboriginal population. Reasons why people may choose not to use condoms were also pursued. Students provided input as to why aboriginal peoples may be hestitant to use condoms (e.g., too expensive, not readily available, believe it to be morally incorrect, cultural reluctance about openly talking about sex, lack of understanding about the seriousness of STDs/AIDS). The lesson ended with an anonymous mini opinion poll regarding some of the controversial issues surrounding the use of condoms in the prevention of STDs/AIDS (Appendix G).

Week Six: Lesson #5

The lesson began with the results of the previous week's opinion poll on condoms. The focus of this session was on a) demonstrating the proper use of condoms and b) role playing to develop the interpersonal skills necessary to decrease risk behaviors.

First an explicit video entitled "HIV±" was shown which was produced by a Vancouver theatre group. A local doctor was invited to help demonstrate the proper use of laxtex condoms with a spermicide containing nonoxynol-9. Students were then given a hands on opportunity to practice putting on a condom over a toilet paper roll using a water based lubricant. Experimentation was encouraged (e.g., testing for durability by blowing one up or by placing an oil based lubricant on the condom and watching the disintegration). In order to maximize learning and to keep embarrassment to a minimal, the atmosphere was kept lively by lighthearted remarks and the use of some comical greeting cards containing condoms.

Following the demonstration, the students were asked to role play in situations where they had to practice saying "no" to high risk behaviors and to attempt to justify their feelings behind the response. Subjects were divided up into partners and took turns looking the partner directly in the eyes while making comments such as, "I do not want to have sex with you unless you wear a condom", or "I do not want to have sex with you because I am afraid of getting AIDS". If partners responded with comments such as, "Don't you care about me?", the students were invited to reply, "Yes, I do, and I also care about myself. I want us to be safe and stay healthy". The role playing continued until one partner was able to say, "That's OK. I can respect your feelings", or "I understand and I will still love you anyway". Emphasis was placed on using three words (care, respect, love) when talking to each other.

At the conclusion of the session, free samples of condoms along with a handout on types of condoms, their proper storage, care and use were distributed. Lastly, an anonymous written survey was taken requesting each individual's feelings about the demonstration (Appendix H).

Week Seven: Lesson #6

This lesson focused on discrimination towards those who are infected with HIV or those who may only be perceived to be infected (e.g., homosexuals). Two videos encouraging compassion were viewed. The first was entitled, Epidemic of Fear:AIDS in the Workplace (1987) which discusses the issues for people with AIDS in the work environment regarding responses of fellow employees and supervisors. The tape provides information and reassurance to emplcyees.

The second video was entitled, AIDS: A Family Experience (1986) which explores the feelings and reactions of a family affected by AIDS. This family discovered that their brother/son was not only dying from AIDS, but was also a homosexual. The death and dying process was examined.

A discussion about how fear can lead to irrational thinking and discrimination ensued. Plagues and epidemics of the past were cited as examples (e.g., quarantines, scapegoats, prejudices, segregation). It was presented that knowledge of how HIV is transmitted can help to dispel the ignorance surrounding the widespread fear of AIDS and therefore lead to both a more compassionate understanding towards AIDS sufferers as well as a more responsible attitude to help dispel the many myths about AIDS in our society (e.g., transmission occurs through casual contact).

Weeks Eight and Nine: Lesson #7

The focus on this session was, "What can I do to help spread knowledge about AIDS transmission and prevention?"

Classes were allowed to choose different endeavors. One made large posters and displayed them around the campus. Pictures were taken of the students holding their posters and praised for their efforts. The teacher education and social service classes chose to prepare lesson plans to present to other students and adults in their communities. The students in the counselling program used the large puppets they had made to create a video depicting a series of mini scripts which explained some of the questions commonly asked about AIDS. This group also did a condom demonstration on their video. The video was dubbed and each student took a copy home to his/her Arctic community to use in his/her assigned counselling practice.

This last lesson took two weeks because of its creative nature. During this time the students also viewed a video entitled, Her Giveaway: A Spiritual Journey with AIDS. This video shares with viewers the personal story and insights of an aboriginal lady with AIDS. The video dispels common misconceptions around AIDS and the aboriginal community. Although the tape portrays a wariness of an AIDS epidemic sweeping through the aboriginal community, it gives a powerful message that aboriginal people must stand together and fight the disease through appropriate behavior that stems from knowledge and compassion.

Week Ten

Posttreatment instruments were administered to both the control and experimental groups. A course evaluation was done by one of the college instructors in order to provide feedback regarding the acceptance of the course and the design of the curriculum.

This chapter has summarized the investigative procedures involved in this study. The subjects comprising the sample have been described, the dependent measures reviewed, and the research design presented. A step-by-step execution plan has been outlined in regard to the 10 weeks of this investigation. The results of the study are presented in the next chapter.

IV. The Results of the Investigation

A total of 122 first and second year students attending the Fort Smith Thebacha Campus of Arctic College in the Northwest Territories participated in the study. An analysis of the data obtained from the pretest-posttest control-group design is presented in this chapter.

Results of the Statistical Analysis of the Data

An analysis of covariance (ANOVA) with classes nested within groups was computed on the data for all three hypotheses. The design was balanced so that of the eight classes who participated in the study, four each were nested within the control and experimental groups.

Because there could be other independent variables besides the AIDS course such as class size, available time allotment for each lesson, and/or the type of student which is prone to enrol in each program (e.g., gender, aptitude), it was important to remove, by regression, those certain recognized environmental effects which had not been controlled effectively by random assignment of intact classes. Thus, posttest means were adjusted to control for error and increase precision in the interpretation of the data.

In addition to the consideration of possible initial differences between the groups was the fact that some of the students did not respond to all the items on the questionnaire. Therefore, a listwise deletion of those in the sample with missing data was performed so that a final sample size of 91 was used to determinine the ANOVA. For the purpose of this study an alpha level of .05 set the level of significant difference between the control and experimental group means.

Results of the Statistical Analysis

Hypothesis #1 stated that the college students who received a comprehensive AIDS prevention program would score higher on knowledge about HIV transmission than the control group of students who received no program. An analysis of covariance controlling for variance between the means of the two groups during pretesting was performed (T x G). This statistical procedure also measured the means for the variance within the groups (T x Cwt). The results from testing this hypothesis are illustrated in Table 1.

Table I

Analysis of Covariance of Knowledge on Posttest

Source	df	MS(between)	MS(within)	F	Probability
Groups	1	322.18	6.25	51.52	0.001 *
Classes(groups)	6	5.21	7.82	.67	0.68

* $p < .001$

It can be seen from Table 1 that there was no significant difference between the classes within the groups ($F = .67$, $p > .05$). Thus it appears that the variability amongst students in regard to the type of program they chose had little or nothing to do with the general knowledge of AIDS each student initially possessed.

Also evident from Table 1 is the significant difference between the posttest means of the experimental and control groups on the knowledge items ($F = 51.52$, $p < .001$).

In order to assess which group had the significant gain in knowledge, the means obtained on the knowledge items for the experimental and control groups were calculated. The results are shown in the following table.

Table 2

Pretest, Posttest, and Adjusted Posttest Means of Knowledge Scores for the Groups

Group	Pretest Means	Posttest Means	Adjusted Posttest Means
Control	13.37	12.95	12.65
Experimental	12.36	16.20	16.50

As can be seen from the adjusted posttest means, the experimental group made substantial gains between pre and posttesting sessions whereas the control group's mean scores remained relatively stable. Therefore, Hypothesis #1 was accepted. The experimental group's score changed significantly more between the pretest and the posttest than did the control group's score.

The results support the hypothesis that knowledge about the transmission and prevention of AIDS can be learned through a comprehensive course targeted towards predominantly aboriginal college students in the Northwest Territories.

Findings for Hypothesis Two

Hypothesis #2 stated that the subjects in the treatment program who addressed the issues imvolved in HIV transmission would show a more positive attitude towards the practice of low risk behaviors tham those subjects in the control group where such issues werre not addressed. The results of an ANOVA controlling for both the variances between the groups and measuring the means for the variance within the groups can be seen in Table 3.

Table 3

Analysis of Covariance of Low Risk Behaviors on Posttest

Source	df	MS(between)	MS(within)	F	Probability
Groups	1	147.00	6.94	21.17	0.005 *
Classes(groups)	6	5.79	13.91	.42	0.87

* $p < .01$

It can be seen from Table 3 that again there was no significant difference between the classes within the groups ($F = .42$, $p > .05$). This indicates that the students in the different classes had similar attitudes towards the practice of low risk behaviors when they initially filled in the pretest questionnaire.

Table 3 also shows a significant difference between the posttest means of the experimental and control groups on the items measuring behavior response ($F = 21.17$, $p < .01$). An assessment of this difference between the means can be found in the following table.

Table 4

Pretest, Posttest, and Adjusted Posttest Means of Low Risk Behavior Scores for the Groups

Group	Pretest Means	Posttest Means	Adjusted Posttest Means
Control	27.32	27.24	27.59
Experimental	29.22	30.56	30.22

As can be seen from the adjusted posttest means, it was again the experimental subjects who made the significant gain between pre and posttesting sessions. The control group's means remained relatively stable. Therefore, Hypothesis #2 was accepted. Following the comprehensive AIDS course the experimental group did show a significant attitudinal change towards the practice of low risk behaviors whereas the control group's responses showed no such change.

Findings for Hypothesis #3

Hypothesis #3 stated that students who received a comprehensive course about HIV transmission would show a more compassionate attitude towards those infected with the

AIDS virus than the control group who received no such program of learning.

An ANOVA controlled for the variance between the means of the two groups during pretesting. It also measured the means of the variance within the groups. The results from testing this hypothesis can be seen in Table 5.

Table 5

Analysis of Covariance of Compassionate Attitude on Posttest

Source	df	MS(between)	MS(within)	F	Probability
Groups	1	204.03	29.75	6.86	0.047 *
Classes(groups)	6	24.79	14.90	1.66	0.14

* $p < .05$

Table 5 shows that again there was no significant difference between the classes within the groups at the time of the pretest ($F = 1.66$, $p > .05$). Thus, it appears that whatever the variability within the classes, it was not sufficient to denote an initial difference on the items measuring students' compassionate attitudes.

However, Table 5 does show a significant difference between the control and experimental groups' posttest means based on the compassionate attitude items ($F = 6.86$,

$p < .05$). In order to assess which group had the significant gain in compassionate attitude, the means obtained for the experimental and control groups were calculated. The results can be seen in the following table.

Table 6

Pretest, Posttest, and Adjusted Posttest Means of Compassionate Attitude Scores for the Groups

Group	Pretest Means	Posttest Means	Adjusted Posttest Means
Control	22.44	22.42	23.06
Experimental	24.46	26.76	26.11

As can be seen, the experimental group made substantial gains between pre and posttesting sessions whereas the control group's mean scores remained relatively stable. Therefore, the third hypothesis was also accepted. The experimental group's score changed significantly more between the pretest and the posttest than did the control group's score.

These results support the hypothesis that given the chance to be enrolled in a comprehensive AIDS prevention course where relevent issues are examined and expressed, northern Canadian college students will develop more empathy and understanding towards those infected with the AIDS virus.

Summary of Results

This study investigated the effect of an educational AIDS prevention program on northern Canadian college students' knowledge and attitudes about AIDS. Eight intact classes of predominantly aboriginal students were assigned to either a control or experimental group. An analysis of covariance was performed in order to correct for any variability amongst the eight classes within the two groups (four classes each) on each of the three dependent variables.

The independent variable was attendance in a comprehensive AIDS prevention course. The three dependent variables were knowledge of AIDS, attitude towards low risk behaviors, and compassionate attitude towards those infected with the AIDS virus.

Results showed that there was no significant difference in the variability amongst the classes at the time of the pretest on any of the dependent variables. This indicated that the experimental and control groups were sufficiently balanced to warrant valid comparisons.

However, a significant difference between the groups was found for all three hypotheses at the .05 alpha level. Adjusted posttest means revealed that the experimental group had a substantial greater change than did the control group in knowledge ($p < .001$), in an attitudinal change towards the practice of low risk behaviors ($p < .01$), and in an increase in compassionate attitude towards those infected with the AIDS virus ($p < .05$).

Chapter IV has presented the results of this experimental study. These results, their implications, and recommendations for future research are discussed in the final chapter.

V. Summary, Discussion, Implications and Recommendations

Summary of Purpose of Study

The purpose of this study was to investigate the effect of a comprehensive AIDS course on the knowledge and attitudes of predominantly aboriginal college students in the Northwest Territories.

A review of the current literature revealed that although many students throughout North America have shown an increase in their knowledge about AIDS, little of this knowledge has been translated into appropriate behavioral changes. The reasons for this repeated phenomenon are grounds for much speculation amongst educators the world over. Some think educational programs are doomed to failure because adolescents are at an age when risk taking behaviors are an inevitable part of their growth and development. Others argue that short educational courses can never be expected to replace cultural values and question the morality of educational programs which blatantly advocate the use of condoms. Still other investigations propose that there has been too much haste in instigating educational programs without an evaluation of their effectiveness. Thus, much effort in time and money may have been expended on inappropriate programs.

Several investigators suggest the need for AIDS education to be specifically targeted to a particular group. They argue that courses which are perceived as relevant will have a greater impact on the students as well as having the support of families within the community. Many researchers (e.g., Nemeth, 1987) propose the need for functional programs which teach practical skill development: "Facts don't change behavior...you can't tell kids to 'just say no' - you've got to teach how to say no" (p. 9).

The Canada Youth and AIDS Study (King et al., 1988) recognized the dilemma for Canadian educators and health promoters in that, inspite of their knowledge about AIDS, Canadian youth continue to behave in ways that put themselves at risk and that knowledge about AIDS has not influenced in positive ways the attitudes of youth toward people with HIV infection. They state:

> It appears STD education has been largely ineffective. Youth are distressingly uninformed about the serious consequences of undetected STDs other than AIDS, have unrealistic beliefs about their chances of becoming infected and have not been motivated to avoid or change behaviours that could result in infection"
> (NWT report, p. 30).

King and his colleagues were concerned that the approach taken thus far to education about AIDS and other STDs has not resulted in behaviour change. They therefore made several valuable recommendations for Canadian educators and health officials who wished to design curriculum. These recommendations are as follows:

a) Information should be current, complete, clear, accurate, and explicit

b) Personal contact for youth with HIV-infected people and/or those affected by AIDS

c) A clear identification of the probability of becoming infected with HIV as a result of engaging in low-to high-risk behaviours

d) A range of sexual behaviour options including but not limited to abstinence

e) Personal skill development, including training in responsible decision making and interpersonal communication

f) Approaches that engender compassion for people with AIDS or HIV infection and tolerance for homosexuality

The study also advocated the evaluation of pilot programs.

This study investigated the results of the implementation of a curriculum designed to meet these recommendations when targeted towards northern Canadian college students.

Discussion of Findings

The experimental investigation was designed to answer three questions:

1. Would college students of predominantly aboriginal descent who received a comprehensive AIDS prevention program show an increase in knowledge of the transmission and prevention of AIDS over those students who received no such program?

2. Would the students who received this program show a more positive attitude change towards the practice of low

risk behaviors than those students who did not receive the program?

3. Having been provided with the opportunity to discuss cultural values and issues surrounding AIDS, would students develop a more compassionate attitude towards those infected with the AIDS virus?

The findings in this study demonstrate clearly that the experimental group's scores changed significantly over the control group's scores in knowledge ($p<.001$), in attitude towards low risk behaviors ($p<.01$), and in an increase in compassionate attitude towards those infected with the AIDS virus ($p<.05$). Thus, all three research hypotheses were accepted. Those students in the experimental group who received the comprehensive two month course showed significant gains in knowledge and desired attitudinal change towards the practice of low risk behaviors and increased compassion towards others with AIDS. The control group showed no trend to do likewise.

Evaluation of the Course

An analysis of covariance was computed on the means of the pretest and adjusted posttest means were evaluated. This was done in consideration that the students among the eight classes in different programs may have differed in ways other than the independent variable (AIDS course) under study, and therefore, extraneous variables may have been affecting the outcomes on the three dependent variables. The results of the ANOVA showed no such initial differences despite the fact that the ratio of males to females within the control and experimental groups had seemed a little disproportionate. When reviewing the sample in chapter III, it had been stated that the experimental group, which was predominantly female, reported far less promiscuous behavior (number of sexual partners) than the predominantly male control group. When the ANOVA was performed on those students who had no missing data on both the pretest and posttest items, the ANOVA sample was considerably smaller. However, the ratio of females to males remained the same in the experimental group (5:1) and in the control group (1:2). Since the ANOVA is designed to control for such discrepancies, this was not considered to be a factor in the outcome of the study. However, one cannot overlook the fact that questions pertaining to gender could be asked regarding the validity of the results. For example, when discussing sexual issues, do women listen better or learn more readily than men? Are women more prone towards empathy and understanding of the feelings of others - especially when it comes to a disease which is often misunderstood as a disease of homosexuals? This raises a question for further research where gender could be factored out to determine if it creates a difference on the outcome of knowledge and attitudes towards AIDS.

The students involved in the program were given the opportunity to evaluate the course content both during the sessions in the anonymous mini polls and also at the end of the course. Their evaluations were most positive. Students welcomed the experience of learning more about AIDS in the context of other STDs and were overwhelmingly positive about the hands on experience with condoms and spermicides. Of all the students who participated in the condom demonstrations, only one reported it made her "feel silly". Examples of the vast majority of comments in response to the question, "How do you feel about the condom demonstration we had in class today?" are: "I think it is good because I know there are some condoms but I never seen really close demonstrations"; "It was good and I enjoyed it very much"; "An excellent idea. It gives us a good outlook on safer sex"; "I think it was interesting because I now know and before I didn't"; or "Very interesting and alot of laughs". Other comments reflected an appreciation of the fact that it was a straight forward approach and that more demonstrations of the same sort were needed in northern communities.

When asked what they liked most about the course, students stated the condom demonstration, learning about STDs, how to practice safer sex, the general level of information throughout the course, the videos showing people and their families dealing with the trauma of AIDS, and that the creative sessions were fun because they gave everyone a chance to personally express their opinions about AIDS to others.

Areas suggested for improvement by the students were that sessions should have been twice a week instead of just once. They felt it was too long between sessions when issues were being discussed and would like to have had the opportunity to both hear the comments of others and voice the feelings that were being stirred up inside them at the time.

They also felt that someone with AIDS could have been presented as a guest speaker. However, it is interesting to note that during the two months the course was progressing, an educator with AIDS did come to speak about his personal experiences at the First NWT Conference on AIDS. Although the students were informed of this opportunity and asked to take advantage of the chance to hear his story, only one person attended any of the free sessions held over the weekend, despite the fact that the workshop was just a few buildings down the street. Therefore, a video of the event was brought to the classroom and students were able to experience what they would have otherwise missed. Unfortunately, it appeared the students wished to gain empathy and a more in-depth understanding of what it was like to be a HIV carrier as long as it involved minimal effort on their part. This apparent lack of interest is another consideration when designing a program. Perhaps their lack of attendance was not apathy. There could be other reasons why aboriginal students may not wish to attend sessions on AIDS out of the school context. Were they frightened of how they would feel listening to the speaker?

Did they feel they already knew much of what was to be said at the conference? Did other activities take priority? These questions become especially relevant when educators must consider the cost of initiating such programs in areas considered remote from major city centers where guest speakers and materials are often readily available.

This study differed from previously reported studies in the literature in that 80% of the college student sample was of aboriginal descent. It also differed because the curriculum was designed to follow the recent recommendations from the federally funded 1988 Canadian Youth and AIDS Study.

Five elements may have contributed to the success of this course. First, the topic was relevant and of prime salience to many of the Thebacha College students as indicated by the fact that more than 50% of the campus population voluntarily participated in the study as well as by the positive response on the course evaluation. This confirms the interest among young people as presented by the Canada Youth and AIDS Study (1988).

Secondly, the curriculum was designed towards a specific target group (i.e., northern Canadian college students). An effort was made to incorporate materials which would be perceived as relevant in age and ethnic content. Thirdly, information was explicity given in order to dissipate entrenched myths surrounding AIDS. A variety of materials and instructional strategies were incorporated into the learning environment by a well trained instructor who was knowledgable about AIDS. Lively videos, a guest speaker, and a "hands on" approach with condoms and spermicides kept the interest high so that the message of "safer" practices was clearly portrayed to everyone: do not share IV needles, use condoms, limit your sexual partners or learn the confidence needed to say "no".

Fourthly, AIDS was not taught in isolation of other STDs. By using graphs and literature to vividly illustrate destructive behavioral patterns such as the NWT gonorrhea rate being 25 times that of the Canadian average (Bergman & Dunn, 1990), perhaps students were less apt to believe in the fallacy of their invulnerability to such diseases.

Lastly, the course length was extended beyond that of a quick workshop. This allowed the students the chance to assimilate the knowledge and experience the comprehensive scope of AIDS and other STDs. Students were provided with the opportunity to discuss issues, discover and clarify personal values, and express and understand differences in opinion in an atmosphere where prevention was not stifled by a distorted sense of morality or a squeamishness about discussions in public.

Implications and Suggestions for Intervention Programs

The implications from this study to those designing and conducting educational programs about AIDS prevention is that more studies need to be focused on what it is about a particular program that influences positive behavioral outcomes as a result of the acquired information. Due to the difficulty of measuring behavior change, the affect of knowledge on behavior is usually assumed rather than measured. While the literature suggests that too many programs presently being implemented have little or no effect on HIV risk behaviors of students, several studies show that programs adapted for a variety of differences among students (e.g., age, ethnicity, course length and availablility, gender, competence of instructor, target group) have had some degree of success in behavioral response. These particular programs are worth consideration if we are to make any progress in curtailing the AIDS epidemic.

Although programs are often limited to AIDS information, several studies reveal a wealth of practical ideas for increasing positive behavior skills. Flora & Thoresen (1988) advocate the need for a focused skills training approach because "students typically are not instructed in the behavioral and cognitive skills required to know...how to use contraceptives or how to resist the pressure to have sex" (p. 967). They cite a study where information on sex was integrated with explicit skills training. The results showed students not only increased their knowledge about sex and contraception, but were observed to behave more effectively in video-taped simulations, such as how to talk with possible partners about sex and how to use contraceptives. The success of the program was attributed to the use of a carefully reasoned theoretical rationale (Bandura's cognitive-social learning theory) to guide the content and the process of the program.

Brick (1987) also was adamant about the need for practical advice for teachers and educational programs with the "AIDS can be prevented" message. "Education about AIDS is more than instruction about a dangerous disease; it is education about how people can make choices that will protect themselves and others" (p. 1). He claimed that in contrast to the scare tactics that have proved to be ineffective in educational methods, the aim is to allay students' fears and demonstrate how they can feel more, not less, in control of their lives.

Brick recommended a continuum for students to evaluate behaviors that put a person at risk from "abstinence and masturbation on one end, to shooting drugs with shared needles and anal sex without a condom on the other" (p. 2) to dramatize the progression from safe to extremely dangerous behaviors. He illustrates how in groups of three, students can rehearse their responses to life-threatening situations through role-playing, discussions and writing. As well, he advocates practical research projects such as developing a true/false questionnaire to survey adults and peers. In this way students can extend their understanding of social responsibility by developing projects that educate others about AIDS.

Other researchers have also discovered effective interventions. Rugg(1987) studied the impact of live theatre on AIDS education. By using a pre and post test design, he discovered that the college students who were the most poorly informed before watching the innovative play on AIDS, increased their knowledge about HIV transmission.

Lareau & Hendrix (1987) provide a 50 minute classroom simulation of how AIDS can be spread in the heterosexual population using colored paper, string or yarn, and press-on name tags.

Yarber (1987) has published a booklet listing several ideas for practical activities which can be employed in and out of the classroom. It would seem that the strategies are endless, but the message is basic: AIDS can be prevented.

It is important that educators do not feel a sense of despair in responding to the difficult challenge of modifying high risk behaviors. Dienstbier (1987) also believes that students should be asked to demonstrate relevant behavioral objectives such as purchasing condoms, donation of their time to condom distribution programs, or assisting AIDS patients. But for those individuals who are not willing to adopt a complete package of safe acts, he argues that it is not necessary to perceive 100% compliance to an ideal behavior in order to determine successful intervention:

> Even when anti-smoking campaigns do not result in individual abstinence, it is possible that brands with less nicotine and tar will be chosen. Similarily, while it has been difficult to end the sharing of needles,

> some IV drug users have begun to disinfect shared needles with bleach, and thereby effectively prevent HIV spread" (p.9).

Faculty can certainly take more initiative in augmenting AIDS awareness programs in their courses. Chambliss (1987) provided several examples. A biology lecture could deal with viruses or immunology, a political science discussion could address minority rights or mandatory testing, a philosophy course could examine the mire of ethical dilemma posed by AIDS, business and economics courses could examine projected health care costs such as stock market responses to pioneering drug companies or employer policies regarding workers with AIDS.

Wallace-Whittaker (1987) reported on one such successful study. Convinced that students in a college advertising class could profit from a discussion about AIDS and condom advertising and hoping to design a related creative problem that would incorporate effective advertising principles, an instructor planned a class project that revolved around public service advertising and the AIDS issue. After studying existing ads and brochures, the students wrote and recorded a radio advertisement for condoms.

In order to ascertain the precise needs of a particular group of students, Miller (1988) reported that one educator provided a 50-minute AIDS lesson plan designed only after the findings of the pretest were analyzed. The posttest revealed this approach provided significant increases in both learning and compassionate beliefs amongst the students.

Other factors aside from methods and content must also be taken into consideration. Trice-Ashton & Price-Greathouse (1987) provide examples of studies where courses of longer duration can make a significant difference in long-term knowledge and behaviors, as well as attitudinal influences determining whether or not students wish to participate in optional programs offered for course credit. In addition, the degree of community support behind an educational program can make a difference on the impact of its target audience (e.g., Van Newkirk, 1988).

Recommendations

> Our students are still learning how to negotiate sexual relationships...how to communicate preferences to partners and how to make responsible choices mutually. Their track record for contraceptive use isn't impressive...open discussions about safe sex are even tougher. Young women seem to have an especially difficult time urging condom use, because of their fears of endangering the relationship or appearing selfish. We have to help our students to stop denying their own vulnerability and get them to take greater personal responsibility in this as in other areas (Chambliss, 1987, p.4).

So much that has been conveyed about AIDS highlights our ignorance and the inadequacies of our technology. Chambliss (1987) also advises that perhaps in our contacts with our students we should emphasize instead the idea that we do know enough to prevent another person from ever contracting AIDS. We simply need to implement what we already know to curb this thing. After all, there really aren't any doubts about how AIDS is passed, and we can prevent its transmission with relatively minor behavioral concessions.

This study has shown how successful a comprehensive AIDS course can be on the knowledge and attitudes of college students in the Northwest Territories. It seems paramount then that those responsible for determining policies concerning the development of the students of Arctic College must recognize the value of implementing such a comprehensive course. A trained counsellor or instructor who is knowledgeable about the facts and issues surrounding AIDS and other STDs, and who is able to provide explicit information which instills a sense of caution along with a sense of self control and compassion towards others, should be hired at each campus of Arctic College to instruct the students. While it is not recommended that this course be mandatory for students, course credit without fees should be offered as incentives to participate in such a program. The course should be offered during the day rather than in the evening as many of the students have family responsibilities.

Futhermore, more effort must be made towards educating the staff of the college. Each member should recognize the need for such a curriculum and support its ongoing development and implementation. Periodically, AIDS workshops with current and accurate information should be given to all staff members of the college. By taking the opportunity to implement accurate and unbiased information about AIDS wherever relevant within one's own subject area, college instructors can help to control the myths, irrational beliefs and negative behaviors which lead to unfounded fears and discrimination. After all, a college's ability to deal with its first AIDS case rationally and compassionately could be very instructive for the students and community. The rationale is clear. The best time to create these policies is now.

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Appendix A

Permission to Conduct Research

Thebacha Campus, Arctic College

ARCTIC COLLEGE
THEBACHA CAMPUS

May 28, 1990

University of Alberta
Department of Educational Psychology
Edmonton, Alberta

RE: RESEARCH PERMISSION, ROSEMARY MOSKAL

This is to confirm that Rosemary Moskal was given permission to conduct research for her Master's thesis on AIDS with students at Thebacha Campus of Arctic College from September - December, 1989.

Dr. J. Mellan
Dean of Instruction

P.O. Box 600, Fort Smith, NT X0E 0P0 • Telephone (403) 872-7500

Appendix B

Canada Youth and AIDS Survey

(revised edition)

____

UNIVERSITY/COLLEGE QUESTIONNAIRE ON AIDS

Instructions to Students:

This questionnaire asks about what you know and how you feel about AIDS. Also, there are questions about your background and behaviors. The information you give will help to improve the quality of education about AIDS for Canadians.

There are five parts to this questionnaire. You should be able to complete all parts in 30 to 40 minutes. Please read all instructions carefully and answer each question as honestly as possible.

The information you provide is confidential. Please do not sign your name to the questionnaire. Thank you for your cooperation.

A Modified Version of the
Canada Youth and AIDS Survey
Queen's University at Kingston

PART A: BACKGROUND

Please read each question carefully. Answer each question by choosing a number from the **KEY** and writing it in the box(es) beside the question. (For some questions you will write in the space provided.)

1. Are you male or female? ☐

KEY
1 = Male
2 = Female

2. How old are you? Years ☐☐

3. What program are you in (e.g., academic studies, social services, secretarial arts, renewable resources)?

Program ______________________________________

4. What year are you in (e.g., 1st, 2nd, 3rd)?

Year ____________________

5. What was your last grade completed (e.g., grade 5, grade 7, grade 12, 1st year college)?

Grade level ____________________

6. How many years have you been out of school (e.g., 0, 1, 2, 5, 10)?

   Number of years ____________________

7. How frequently have you attended church in the past 12 months?

   KEY
   1 = Regularly
   2 = Now and then
   3 = On special occasions only
   4 = Never

   ☐

8. Where is your permanent place of residence (e.g., Fort Smith, Fort Simpson, Inuvik)?

   Home ____

9. What is your ethnic background?

   KEY
   1 = Dene
   2 = Metis
   3 = Inuit
   4 = Other (please specify)
   ____

   ☐

10. Which is the most accurate description of your situation?

☐

KEY
1 = Single
2 = Married
3 = Married with children
4 = Common-law
5 = Common-law with children
6 = Separated
7 = Separated with children
8 = Divorced
9 = Divorced with children

11. With whom do you presently live?

☐

KEY
01 = Myself
02 = Myself & children
03 = Husband/wife
04 = Husband/wife/and children
05 = Boyfriend/girlfriend
06 = Boyfriend/girlfriend/and children
07 = Parent(s)/guardian(s)
08 = Relative(s)
09 = Friend(s) of the same sex as me
10 = Friend(s) of the opposite sex as me
11 = A group of friends (mixed sexes)
12 = Other (please specify)

____

12. What is the highest level of education completed by your parents?

Mother ☐

Father ☐

KEY

1 = Elementary school or less
2 = Some secondary school
3 = Graduated from secondary school
4 = Graduated from college
5 = Graduated from university
6 = Other (please specify)
____
7 = Don't know

13. What are the occupations of your parents? (If retired, what were their occupations prior to retirement?)

Mother ☐

Father ☐

KEY

01 = Professional (e.g., accountant, doctor, lawyer, teacher, nurse)
02 = Business (e.g., owner, manager, executive)
03 = Factory or farm worker, miner, labourer, waitress, cook
04 = Clerical (e.g., sales clerk, secretary)
05 = Sales (e.g., real estate, insurance)
06 = Skilled worker (e.g., carpenter, electrician, plumber, policeman, chef)
07 = Farmer, fisherman or trapper
08 = Homemaker
09 = Unemployed
10 = Other (please specify)
____

PART B: SOURCES OF INFORMATION

Please read each question carefully. For questions 14 to 18 use the **KEY** below.

KEY

01 = Television
02 = Radio
03 = Magazines
04 = Newspapers
05 = Pamphlets
06 = Books/Journals
07 = Videos/Movies
08 = Mother
09 = Father
10 = Other family member
11 = Friends
12 = Nurse
13 = Doctor
14 = Personal experience
15 = School
16 = Church
17 = Community Health Clinic
18 = Telephone "Hotline"
19 = Other (please specify)
____

14. What have been your best sources of information about sex?

Best ☐☐
2nd Best ☐☐
3rd Best ☐☐

15. What have been your best sources of information about birth control?

Best ☐☐
2nd Best ☐☐
3rd Best ☐☐

16. What have been your best sources of information about sexually transmitted diseases other than AIDS (e.g., herpes, gonorrhea, syphlis)?

Best ☐☐
2nd Best ☐☐
3rd Best ☐☐

KEY

01 = Television
02 = Radio
03 = Magazines
04 = Newspapers
05 = Pamphlets
06 = Books/Journals
07 = Videos/Movies
08 = Mother
09 = Father
10 = Other family member
11 = Friends
12 = Nurse
13 = Doctor
14 = Personal experience
15 = School
16 = Church
17 = Community Health Clinic
18 = Telephone "Hotline"
19 = Other (please specify) ______________________

17. What have been your best sources of information about AIDS?

Best ☐☐
2nd Best ☐☐
3rd Best ☐☐

18. From which sources would you prefer to find out about AIDS?

1st ☐☐
2nd ☐☐
3rd ☐☐

19. Over the past two years, about how many hours have you spent learning about AIDS?

Hours ☐☐

PART C: Behaviours

Please read each question carefully. Answer each question by choosing a number from the **KEY** and writing it in the box beside the question. (For some questions you will write in the space provided.)

20. In the past 12 months, how often have you used the following substances?

KEY
1 = Never
2 = About once a month
3 = 2-3 times a month
4 = Once a week
5 = 2-3 times a week
6 = Every day

a) Alcohol (beer, wine, or liquor) ☐
b) Cannabis (hashish or marijuana) ☐
c) Chewing Tobacco ☐
d) Cocaine ☐
e) Other non-medical substances (e.g., speed, solvents such as glue, or heroin) ☐
(Please specify) ______________________________

21. How much alcohol do you usually have at one time? ☐

KEY
1 = None
2 = 1-2 drinks
3 = 3-4 drinks
4 = 5 or more drinks

22. How many cigarettes do you usually smoke a day? ☐

KEY
1 = None
2 = Less than 10
3 = 10-20
4 = More than 20

23. How would you describe your sexual orientation? ☐

KEY
1 = Heterosexual = opposite sex partner(s)
2 = Homosexual = same sex partner(s)
3 = Bisexual = partner(s) of both sexes

24. How often have you had the following sexual experiences?

KEY
1 = Never
2 = Once
3 = A few times
4 = Often

a) Hugging ☐
b) Deep (open mouth) kissing ☐
c) Petting above the waist ☐
d) Petting below the waist ☐
e) Sleeping together (without sexual intercourse) ☐
f) Sexual intercourse ☐
g) Oral sex ☐
h) Anal sexual intercourse ☐
i) Other (please specify) ____________________ ☐

If you have not had sexual intercourse, please go on to question 31.

25. Approximately how many sexual partners have you had? ☐

26. How would you describe your sexual relationship(s)?

KEY
1 = Yes
2 = No

a) Long term (serious) ☐
b) Long term (casual) ☐
c) Short term (serious) ☐
d) Short term (casual) ☐
e) One night stand(s) ☐
f) With a prostitute ☐

27. For what reason(s) did you *first* have sexual intercourse?

1st Reason ☐
2nd Reason ☐

KEY
01 = It was expected by friends
02 = To maintain a relationship
03 = Curiosity
04 = Under the influence of alcohol or other drugs
05 = Got carried away by passion
06 = Loneliness
07 = Love for the person
08 = Physical attraction
09 = It occurred without my consent
10 = Other (please specify)

____

28. How old were you when you first had sexual intercourse (vaginal or anal)? Age ☐☐

29. How often have you and your sexual partner(s) used the following methods of protection to:

A) prevent pregnancy?

B) prevent AIDS?

KEY
1 = Never
2 = Sometimes
3 = Most of the time
4 = Always

	(A) To prevent pregnancy	(B) To prevent AIDS
a) Birth control pill	☐	☐
b) Condom	☐	☐
c) Spermicide (foam or gel)	☐	☐
d) Condom and spermicide	☐	☐
e) Rhythm method	☐	☐
f) Withdrawal	☐	☐
g) Diaphragm	☐	☐
h) Morning after pill	☐	☐
i) Other (please specify) ______________________	☐	☐

30. If you are having sexual intercourse and are not consistently using protection, please state your reason(s) for not protecting yourself.

____

____

____

31. For what reason(s) have you not had sexual intercourse?

1st reason ☐☐

2nd reason ☐☐

KEY

01 = Religious (moral) beliefs

02 = Fear of pregnancy

03 = Fear of sexually transmitted diseases such as AIDS

04 = Parental disapproval

05 = Friends' disapproval

06 = Guilt feelings

07 = Want to be a virgin until marriage

08 = Have not met the right person

09 = Not interested

10 = Other (please specify)

____

PART D: KNOWLEDGE OF AIDS

Please indicate whether the following statements are correct by using this **KEY**.

KEY
1 = Yes
2 = No
3 = Don't know

32. Internationally, the AIDS virus is called the human immunodeficiency virus (HIV). ☐

33. The AIDS virus weakens the immune system by destroying red blood cells. ☐

34. A person who has the AIDS virus can be free from signs and symptoms of the disease. ☐

35. The AIDS virus can be caught from a toilet seat, water fountain, or swimming pool. ☐

36. All homosexual (gay) men carry the AIDS virus. ☐

37. There are blood tests that detect if a person has been infected by the AIDS virus. ☐

38. AIDS is the leading cause of death among young people in Canada. ☐

KEY
1 = Yes
2 = No
3 = Don't know

39. A person can be infected by the AIDS virus for seven or more years before developing signs and symptoms of the disease. ☐

40. Vaseline is a good lubricant to use with a condom. ☐

41. The AIDS virus can be spread from a female to her unborn child during pregnancy. ☐

42. The AIDS virus can be spread by infected vaginal secretions. ☐

43. A person can be infected by the AIDS virus for up to six months before its presence can be detected. ☐

44. A woman is more likely to become infected if she has sexual intercourse with a carrier of the AIDS virus during her menstrual period. ☐

45. A baby can become infected through breast-feeding if the mother carries the AIDS virus. ☐

46. Sharing drug needles puts a person at risk of being infected by the AIDS virus. ☐

KEY
1 = Yes
2 = No
3 = Don't know

47. Condoms with a spermicidal foam or gel (used properly) give very effective protection from the AIDS virus. ☐

48. The AIDS virus can be transmitted from the female to the male during sexual intercourse. ☐

49. Ear piercing is one possible way to spread the AIDS virus. ☐

50. The AIDS virus can be spread through hugging. ☐

51. AZT (azidothymidine) is a cure for AIDS. ☐

52. Having many sexual partners increases a person's risk of being infected with the AIDS virus. ☐

53. Homosexual females and homosexual males are equally at risk for contracting the AIDS virus. ☐

PART E: VIEWS

Please read each statement carefully. Place a number from the **KEY** below in the box beside each statement to show whether you agree or disagree with it.

KEY
1 = Strongly Agree
2 = Agree
3 = Don't Know
4 = Disagree
5 = Strongly Disagree

54. I need to know a lot more about AIDS. ☐

55. I can keep myself from getting AIDS. ☐

56. When I have a big decision to make, I ask my friends for advice. ☐

57. I am often sorry for the things I do. ☐

58. I have confidence in myself. ☐

59. I need to lose weight. ☐

60. Unmarried people should not have sex. ☐

KEY
1 = Strongly Agree
2 = Agree
3 = Don't Know
4 = Disagree
5 = Strongly Disagree

61. I would be too embarrassed to see my family doctor if I thought I had AIDS. ☐

62. My parents understand me. ☐

63. I have my own rules for my sexual behavior. ☐

64. Homosexuality is acceptable today. ☐

65. People of my age practice "safer" sex. ☐

66. People who have the AIDS virus should be allowed to ride on public transit (e.g., buses, airplanes, subway trains). ☐

67. Most people can be trusted to tell the truth about their past sexual experiences. ☐

68. I often have a hard time saying "no". ☐

69. I do not have much in common with people of my age. ☐

KEY
1 = Strongly Agree
2 = Agree
3 = Don't Know
4 = Disagree
5 = Strongly Disagree

70. I would be embarrassed to buy condoms. ☐

71. I worry about the threat of nuclear war. ☐

72. I feel pressure from my friends to drink alcohol. ☐

73. My parents trust me. ☐

74. I diet to stay thin. ☐

75. I could not be a friend of someone with AIDS. ☐

76. No one cares much about what happens to me. ☐

77. I consider myself to be a good student. ☐

78. Sexual partners are easy to find. ☐

79. By learning the facts about AIDS, people can act in ways to prevent it from spreading. ☐

KEY
1 = Strongly Agree
2 = Agree
3 = Don't Know
4 = Disagree
5 = Strongly Disagree

80. It is alright for two people to have sex before marriage if they are in love. ☐

81. I often get frustrated. ☐

82. I would tell my sexual partner if I thought I had the AIDS virus. ☐

83. I have a lot of friends. ☐

84. Before considering sex, I would talk with my partner about his or her past sexual experiences. ☐

85. I often am blamed for things that are not my fault. ☐

86. My friends encourage me to do things I know are wrong. ☐

87. I am worried that someone of my own sex will make a sexual advance toward me. ☐

KEY

1 = Strongly Agree
2 = Agree
3 = Don't Know
4 = Disagree
5 = Strongly Disagree

88. Government officials keep young people from getting needed information about AIDS. ☐

89. Sex without love is not satisfying. ☐

90. I have trouble making decisions. ☐

91. I often feel left out of things. ☐

92. It is important to control sexual urges. ☐

93. I need to gain weight. ☐

94. I talk about sex with my close friends. ☐

95. My friends often ask me for help and advice. ☐

96. People who get sick are just unlucky. ☐

97. I choose friends who share my ideas. ☐

KEY
1 = Strongly Agree
2 = Agree
3 = Don't Know
4 = Disagree
5 = Strongly Disagree

98. Homosexuality is wrong. ☐

99. Someone like me could never have an effect on what happens in the world. ☐

100. I think there will always be somebody telling me what to do. ☐

101. The future looks good to me. ☐

102. What my parents think of me is important. ☐

103. I am worried about getting AIDS. ☐

104. I have a fairly clear idea of my future career. ☐

105. If I have a problem, I usually keep it to myself. ☐

106. I would encourage friends to get help from a community health clinic if they thought they had a sexually transmitted disease. ☐

KEY
1 = Strongly Agree
2 = Agree
3 = Don't Know
4 = Disagree
5 = Strongly Disagree

107. Homosexuals should be allowed to teach young people. ☐

108. I ask my parents for advice on serious matters. ☐

109. Carrying a condom means you are planning to have sex. ☐

110. People who have the AIDS virus should be allowed to work in a hospital. ☐

111. I feel pressure from my friends to use marajuana. ☐

112. I expect to have casual sex (one night stands) in the future. ☐

113. I discuss my problems with my friends. ☐

114. I like myself. ☐

115. I often cannot sleep worrying about things. ☐

KEY
1 = Strongly Agree
2 = Agree
3 = Don't Know
4 = Disagree
5 = Strongly Disagree

116. I exercise to stay fit. ☐

117. I expect to engage in homosexual activities in the future. ☐

118. I sometimes have thoughts about committing suicide. ☐

119. The fear of getting AIDS is preventing me from having sex. ☐

120. I wish my complexion (facial skin) was better. ☐

121. I do not know what "safer sex" is. ☐

122. Planning ahead is pointless. ☐

123. I would help a friend quit smoking. ☐

124. I think that I am attracted to people of my own sex. ☐

KEY
1 = Strongly Agree
2 = Agree
3 = Don't Know
4 = Disagree
5 = Strongly Disagree

125. I trust what the government says about AIDS. ☐

126. My friends and I talk a lot about AIDS. ☐

127. I would change how I look if I could. ☐

128. I often feel lonely. ☐

129. People who have the AIDS virus should be allowed to immigrate to Canada. ☐

130. I believe in getting sexual pleasure where I find it. ☐

131. I intend to use cocaine in the future. ☐

132. I am embarrassed when I am with someone of the opposite sex. ☐

133. I would talk to my sexual partner about wearing a condom for our protection. ☐

KEY
1 = Strongly Agree
2 = Agree
3 = Don't Know
4 = Disagree
5 = Strongly Disagree

134. I feel pressure from my friends to be sexually active. ☐

135. People who have the AIDS virus should be allowed to be teachers. ☐

136. I consider myself to be a good athlete. ☐

137. Life is just one worry after another. ☐

138. I would feel comfortable talking to a homosexual person. ☐

139. The messages I get from television, radio, and newspapers about AIDS confuse me. ☐

140. Having sex should just happen naturally. ☐

141. I often wish I were someone else. ☐

142. People who have the AIDS virus should be required to live in isolation from other people. ☐

KEY

1 = Strongly Agree
2 = Agree
3 = Don't Know
4 = Disagree
5 = Strongly Disagree

143. Physical appearance is important for popularity. ☐

144. People who have AIDS are getting what they deserve. ☐

145. I would raise my children differently from the way my parents raised me. ☐

146. People who have the AIDS virus should be allowed to serve the public (e.g., waiter, chef, hair stylist). ☐

147. For the rest of my life I intend to have sex with only one partner. ☐

148. What happens to my health depends mainly on me. ☐

149. I would stop a friend from driving if he or she had too much alcohol to drink. ☐

150. I feel uncomfortable when someone of the same sex touches me. ☐

KEY
1 = Strongly Agree
2 = Agree
3 = Don't Know
4 = Disagree
5 = Strongly Disagree

151. I often feel depressed. ☐

152. A condom interfers with sexual pleasure. ☐

153. My parents expect too much of me. ☐

154. People of the opposite sex seem to like me. ☐

155. Some people will be infected by the AIDS virus no matter how they try to avoid it. ☐

156. What my friends think of me is very important. ☐

157. People who have been infected by the AIDS virus should be required to let others know that they have it. ☐

158. When things are going to happen, they will happen no matter what I do. ☐

159. I am too shy to make a lot of friends. ☐

KEY
1 = Strongly Agree
2 = Agree
3 = Don't Know
4 = Disagree
5 = Strongly Disagree

160. The way to stay healthy is to do what the doctor says. ☐

161. I am a happy person. ☐

Thank you for taking part in this study.

Appendix C

Questionnaire Items for Hypotheses

Questions for Hypothesis #1

32. Internationally, the AIDS virus is called the human immunodeficiency virus (HIV).

33. The AIDS virus weakens the immune system by destroying red blood cells.

34. A person who has the AIDS virus can be free from signs and symptoms of the disease.

35. The AIDS virus can be caught from a toilet seat, water fountain, or swimming pool.

36. All homosexual (gay) men carry the AIDS virus.

37. There are blood tests that detect if a person has been infected by the AIDS virus.

38. AIDS is the leading cause of death among young people in Canada.

39. A person can be infected by the AIDS virus for seven or more years before developing signs and symptoms of the disease.

40. Vaseline is a good lubricant to use with a condom.

41. The AIDS virus can be spread from a female to her unborn child during pregnancy.

42. The AIDS virus can be spread by infected vaginal secretions.

43. A person can be infected by the AIDS virus for up to six months before its presence can be detected.

44. A woman is more likely to become infected if she has sexual intercourse with a carrier of the AIDS virus during her menstrual period.

46. Sharing drug needles puts a person at risk of being infected by the AIDS virus.

47. Condoms with a spermicidal foam or gel (used properly) give very effective protection from the AIDS virus.

48. The AIDS virus can be transmitted from the female to the male during sexual intercourse.

49. Ear piercing is one possible way to spread the AIDS virus.

50. The AIDS virus can be spread through hugging.

51. AZT (azidothymidine) is a cure for AIDS.

52. Having many sexual partners increases a person's risk of being infected with the AIDS virus.

53. Homosexual females and homosexual males are equally at risk for contracting the AIDS virus.

Questions for Hypothesis #2

55. I can keep myself from getting AIDS.

70. I would be embarrassed to buy condoms.

92. It is important to control sexual urges.

112. I expect to have casual sex (one night stands) in the future.

121. I do not know what "safer sex" is.

130. I believe in getting sexual pleasure where I find it.

147. For the rest of my life I intend to have sex with only one partner.

152. A condom interfers with sexual pleasure.

Questions for Hypothesis #3

66. People who have the AIDS virus should be allowed to ride on public transit (e.g., buses, airplanes, subway trains).

75. I could not be a friend of someone with AIDS.

110. People who have the AIDS virus should be allowed to work in a hospital.

129. People who have the AIDS virus should be allowed to immigrate to Canada.

135. People who have the AIDS virus should be allowed to be teachers.

142. People who have the AIDS virus should be required to live in isolation from other people.

144. People who have the AIDS virus are getting what they deserve.

146. People who have the AIDS virus should be allowed to serve the public (e.g., waiter, chef, hair stylist).

Appendix D

Student Consent Form

University of Alberta
Edmonton
Canada T6G 2G5

Faculty of Education
Clinical Services
1-135 Education North, Telephone (403) 432-3746

CONSENT FORM

I, ____, agree to respond to a questionnaire on Acquired Immune Deficiency Syndrome (AIDS). I realize that my responses to the questionnaire will be identified by a number in order that the researcher be able to match pretest and posttest questionnaires. I have been assured that my confidentiality will be maintained.

I also acknowledge that I may have the opportunity to participate in a program about the transmission and prevention of AIDS. I understand that I have the option to participate in the study without responding to the questionnaire and/or that I can withdraw from the study at any time.

signed ______________________________
date ______________________________

Thank you for your cooperation in this study.

Professor H. Zingle
Thesis Committee Chairman

Rosemary Moskal
M. Ed Research Investigator

Appendix E

AIDS Course Outline

AIDS Course Outline

Lesson One

- definition, origin and symptoms of AIDS
- seriousness of the pandemic
- video: AIDS: Everything You Should Know (Whoopi Goldberg)*
- distribution of information on AIDS and resources available in the NWT

Lesson Two

- review quiz on AIDS knowledge
- viruses versus bacteria
- how HIV attacks the immune system
- preventative vaccines and treatment drugs
- experimental drug treatment procedures
- opinion poll on experimental drugs controversy (Appendix F)
- video: Facts About AIDS (David Suzuki)

Lesson Three

- review quiz on the immune system
- results of opinion poll
- testing procedures for the AIDS virus
- implications of test results
- ethical issues regarding confidentiality
- video: Two People in the Baffin Region Test Positive for the AIDS Virus (CBC's Focus North, November 1988)

Lesson Four

- review quiz on HIV testing
- sexually transmitted diseases other than AIDS
- symptoms
- common sense precaution and prevention
- incidence in the NWT as compared with Canada
- possible reasons for the failure to use condoms
- controversy regarding availability of condoms (machines in washrooms)
- opinion poll regarding use of condoms (Appendix G)

Lesson Five

- results of opinion poll
- video: HIV± (Vancouver Arts Theatre Group)
- demonstration of the proper use of a condom
- "hands on" experience with condoms, spermicides and toilet paper rolls
- role playing to develop interpersonal skills required for low risk behaviors
- distribution of condom samples and review of procedures
- opinion poll on explicit condom demonstration (Appendix H)

Lesson Six

- ignorance and fear leads to discrimination towards those either infected or perceived to be infected with the AIDS virus
- evidence of "plague mentality" in the past
- video: Epidemic of Fear: AIDS in the Workplace (1987)

- video: AIDS: A Family Experience (1986)
- our responsibility towards compassion

Lesson Seven

- "What can I do?"
  (a creative opportunity to help dispel myths which lead to irrational thinking such as posters, lesson plans, puppet plays, condom demonstrations, video creations)
- video: Her Giveaway: A Spiritual Journey with AIDS
- anonymous course evaluation

* Videos and other resources (e.g., pamphlets, articles from magazines and newspapers, books, research studies) are available from every provincial/territorial Department of Health. The address of the NWT AIDS Program is:

Department of Health
Government of the NWT
Box 1320, Yellowknife, NWT
X1A 2L9
Phone: 403-920-3322

The address of the Federal Centre for AIDS is:

2nd Floor
Bonaventure Bldg.
301 Elgin Street
Ottawa, Ontario
K1A 0L2
Phone: 613-957-1774

Appendix F

Experimental Drugs Opinion Poll

CONTROVERSY:

Below are 3 questions related to treatment by experimental drugs. Beside **opinion** circle either **yes**, **no**, or **cannot decide**. Then explain your reasoning on the lines below.

a) Should AIDS victims be allowed to receive new drugs before they have been officially approved?

opinion: yes no cannot decide

____
____
____

b) Should participants in an experiment be told they will be receiving a **placebo?**

opinion: yes no cannot decide

____
____
____

c) Should the people with AIDS have to pay the first $2,000.00 for AZT? (Annual cost is $8,000.00)

opinion: yes no cannot decide

____
____
____

Appendix G

Condom Controversy Opinion Poll

Condom Controversy

1. We have been discussing the controversy surrounding the advertising of condoms on TV and in the newspapers and magazines. Do you think this is a good way for Canadians to learn about using condoms?

yes no undecided

Explain: ______________________________

____

____

2. Do you think the Government of the Northwest Territories is doing enough to promote the use of latex condoms in the prevention of sexually transmitted diseases?

yes no undecided

Explain: ______________________________

____

____

3. Do you think condom dispensers should be placed in the high school washrooms in the NWT?

yes no undecided

Explain: ______________________________

____

____

Thank you for responding.

Appendix H

Condom Demonstration Opinion Poll

a) I am a male ______ female ______

b) My age is ________

1. Have you ever used a condom?

   yes _____ no ____

2. If not, please indicate some of the reasons you chose not to do so.

3. Do you think your friends or the people in your community are using condoms every time they engage in sex?

   yes _____ no ______ don't know ______

4. What do you think the main reason might be for unprotected sex in your community?

5. How do you feel about the condom demonstration we had in class today?

____

____

____

____

6. Do you think you will be more apt to use a condom during sexual intercourse in the future?

yes ______ no ______ don't know ______

Please explain the reason for your answer.

____

____

____

Thank you for taking the time to answer these questions.

Appendix I

Permission to use Canada Youth and AIDS Instrument

SOCIAL PROGRAM EVALUATION GROUP

Duncan McArthur Hall
Queen's University
Kingston, Canada
K7L 3N6
Tel. 613 545-6255

19 December 1989

Ms. Rosemary Moskal
Box 876
Fort Smith, N.W.T.
X0E 0P0

Dear Ms. Moskal:

Thank you for your letter of November 25 with the copy of your questionnaire. You have our permission to use any part of the **Canada Youth and AIDS** questionnaire as long as credit for the source of item is identified.

We regret the the Technical Report for the study is not yet available, but expect it will be completed within the next two months at which time we will forward you a copy.

Good luck with your thesis.

Sincerely,

M MacKay for

Alan J.C. King, Ed.D.
Director, Social Program Evaluation Group
Professor, Sociology of Education